DTC-ZE700

SERVICE MANUAL

US Model
Canadian Model
AEP Model
UK Model

Note: For the AEP, UK model, there are a former type and a new type depending on whether the DETECTION board is mounted or not. The US, Canadian model has a new type only. Respective serial numbers are as listed below.

- Former type (DETECTION board not mounted)
  Serial No. #501001 – #501093
  #4500001 – #4500300
- New type (DETECTION board mounted)
  Serial No. other than above

Model Name Using Similar Mechanism	DTC-790
Tape Transport Mechanism Type	DATM-110

SPECIFICATIONS

System

Tape	Digital audio tape
Recording head	Rotary head
Recording time (when using DT-120)	Standard: 120 minutes Long-play: 240 minutes
Tape speed	Standard: 8.15 mm/s Long-play: 4.075 mm/s
Drum rotation	Standard: 2,000 rpm Long-play: 1,000 rpm
Track pitch	13.6 µm (20.4 µm)
Sampling frequency	48 kHz, 44.1 kHz, 32 kHz
Number of channels	2 channels, stereo
D/A conversion (quantization)	Standard: 16 - bit linear Long-play: 12 - bit non-linear
Frequency response*	Standard: 2 - 22,000 Hz (±0.5 dB) Long-play: 2 - 14,500 Hz (±0.5 dB)
Signal-to-noise ratio*	90 dB or more (Standard and long-play mode)
Dynamic range*	90 dB or more (Standard and long-play mode)
Total harmonic distortion*	Standard: 0.005% or less (1 kHz) Long-play: 0.008% or less (1 kHz)
Wow and flutter	Below measurable limit (±0.001% W.PEAK)

* During analog input with the SBM function off.

Input connectors

Connector	Jack type	Input impedance	Rated input level
ANALOG	Phono jacks	47 kilohms	–4 dBs
DIGITAL OPTICAL	Optical connector	—	—
DIGITAL COAXIAL	Phono jack	75 ohms	0.5 Vp-p

– Continued on next page –

使用時は添付資料も参照のこと
Refer to the additional documents.

DIGITAL AUDIO TAPE DECK

SONY

Output connectors

Connector	Jack type	Output impedance	Rated output level	Load impedance
ANALOG	Phono jacks	470 ohms	–4 dBs	10 kilohms or more
DIGITAL OPTICAL	Optical connector	—	(wavelength 660 nm)	—
PHONES	Stereo phone-plug jack	100 ohms	1.2 mW	32 ohms

General section

Power requirements

Where purchased	Power requirements
USA, Canada	120 V AC, 60 Hz
Europe	230 V AC, 50/60 Hz

Power consumption 30 W

Dimensions Approx 430 × 106 × 325 mm (w/h/d) (17 × 4 1/4 × 12 7/8 inches)

Weight Approx 5.0 kg (11 lb 0.4 oz)

Supplied accessories

- Pin-plug audio connecting cords (2)
- Remote commander (remote) RM-D757 (1)
- Size-AA (R6) batteries (2)
- Operating instructions (1)
- Audio connecting cords (2)

Design and specifications are subject to change without notice.

PRECAUTIONS FOR INSPECTIONS AND REPAIR WITH POWER OFF

Before beginning repair work after turning OFF the main switch, be sure to first remove CN901 (EH5P), 902 (EH6P) of the main board. When assembling the equipment, be sure to plug this connector last.
Even with the main switch turned off, there still remain electrical charges in part of the power circuit. Therefore, plugging in or removing the connector could cause the power supply terminal to short with an adjacent terminal. This could cause possible component damage.

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

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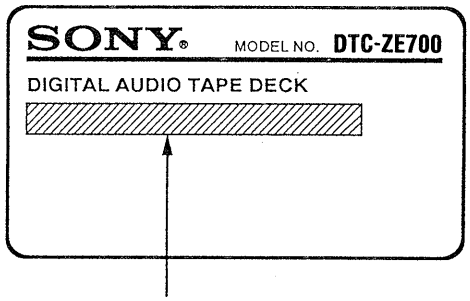
MODEL IDENTIFICATION

—Model Number Label—



US, Canadian model : AC 120V 60Hz 30W
AEP, UK, German model: AC 220–240~50/60 30W

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COM- POSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:
Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage.
Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers.). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

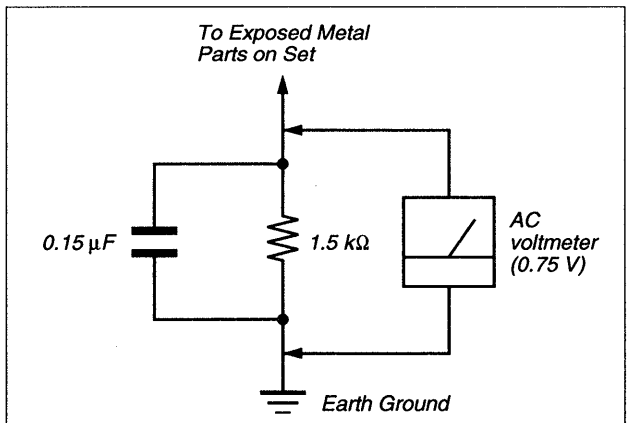
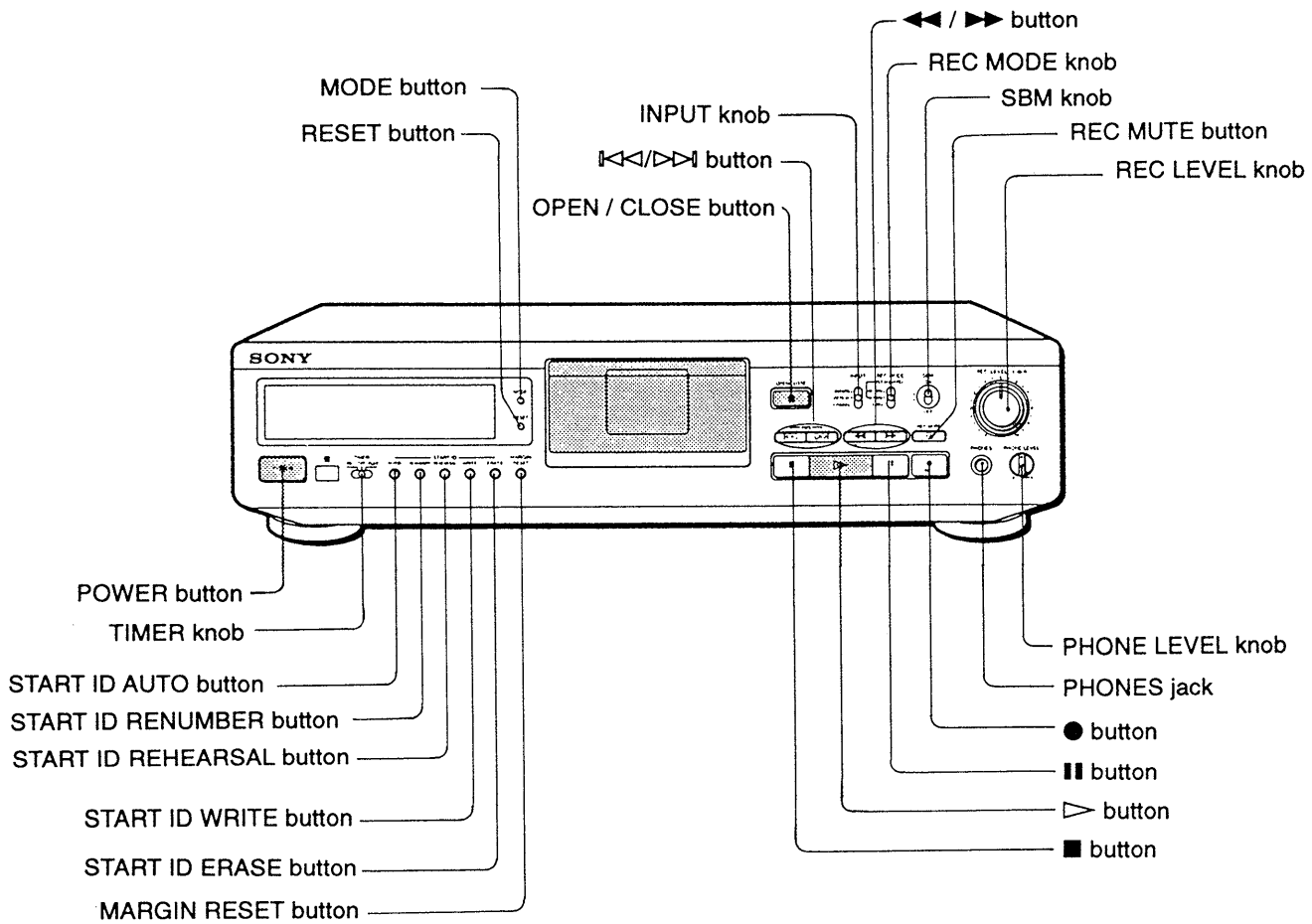


Fig. A. Using an AC voltmeter to check AC leakage.

SECTION 1
GENERAL

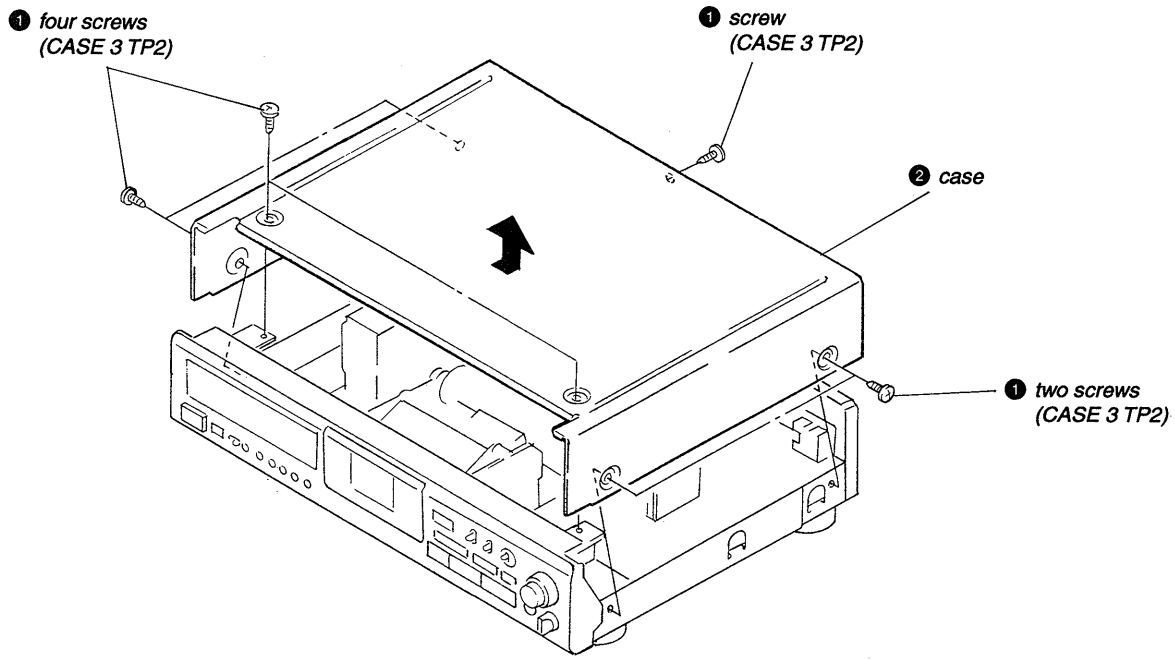
Location of Parts and Controls



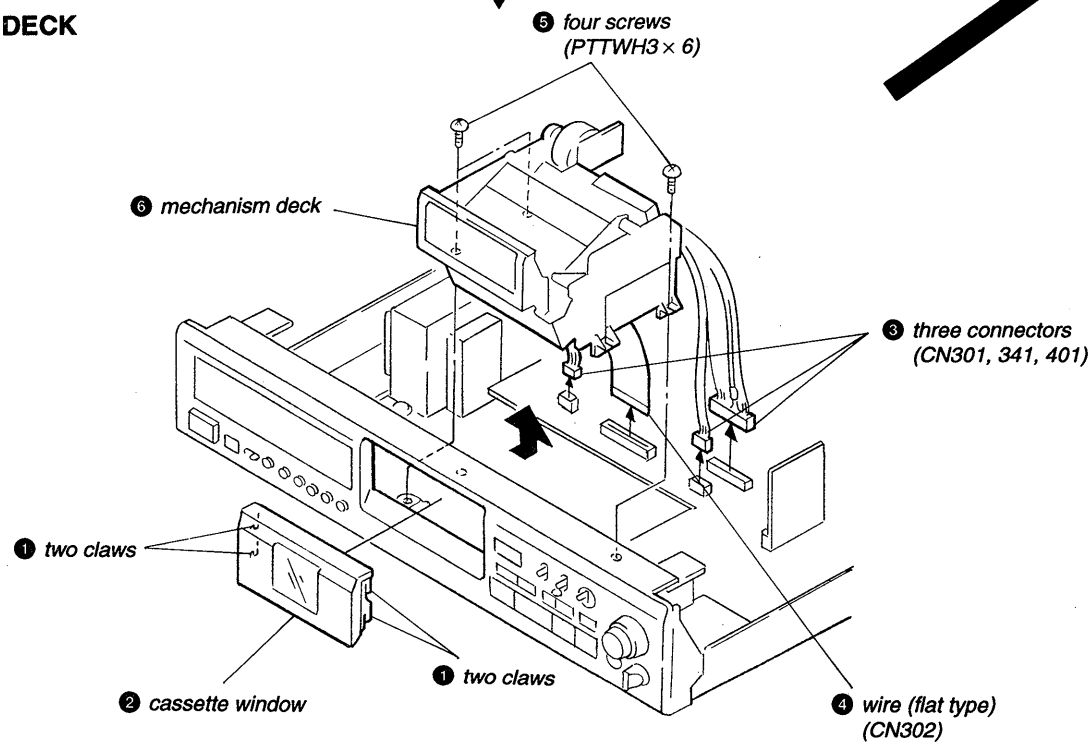
SECTION 2
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

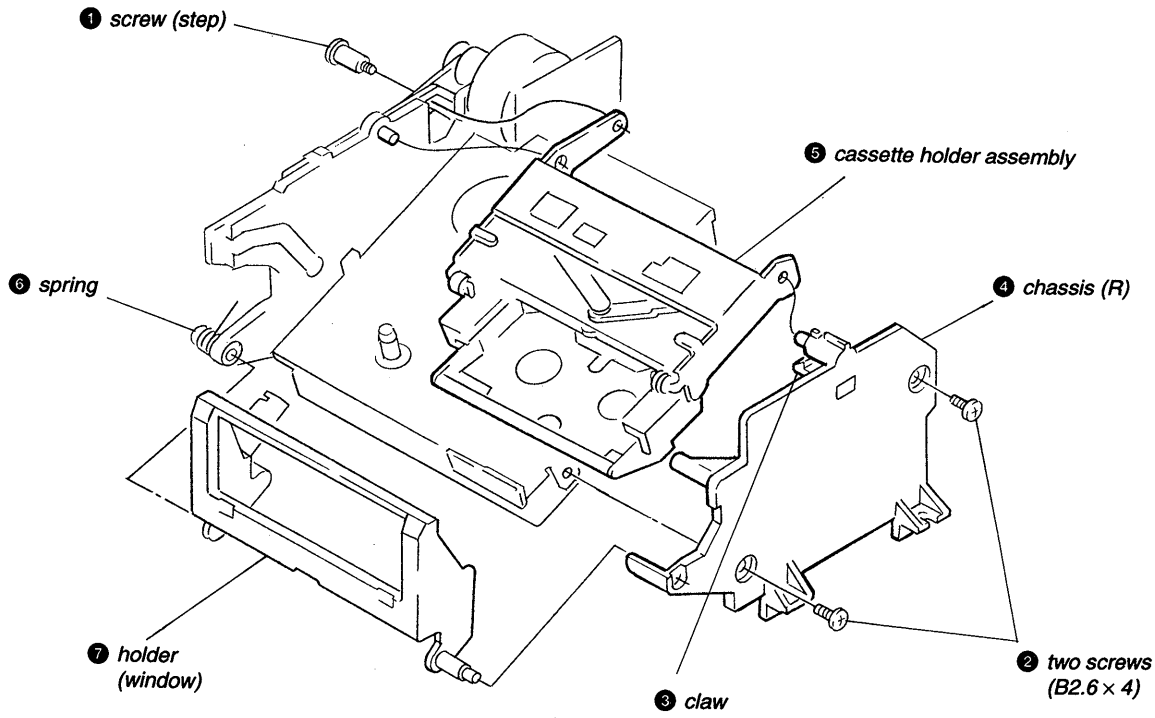
CASE



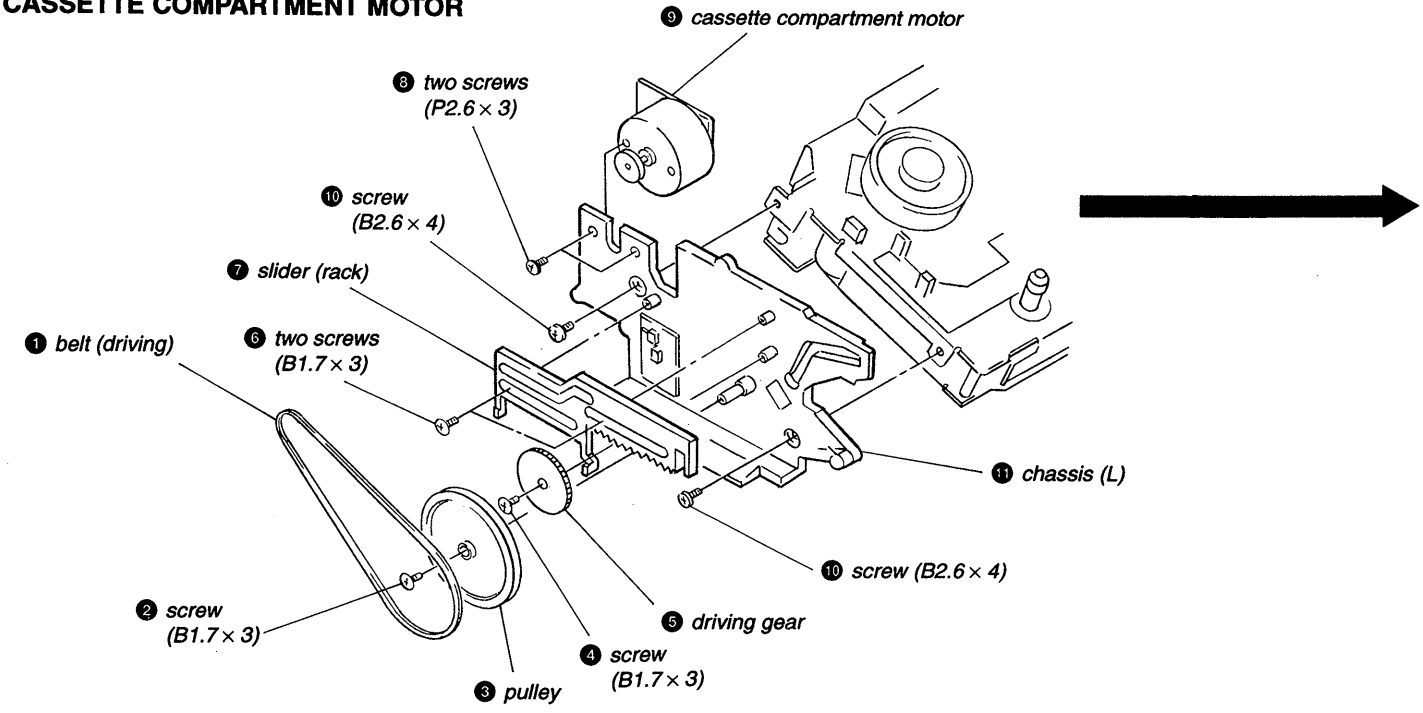
MECHANISM DECK



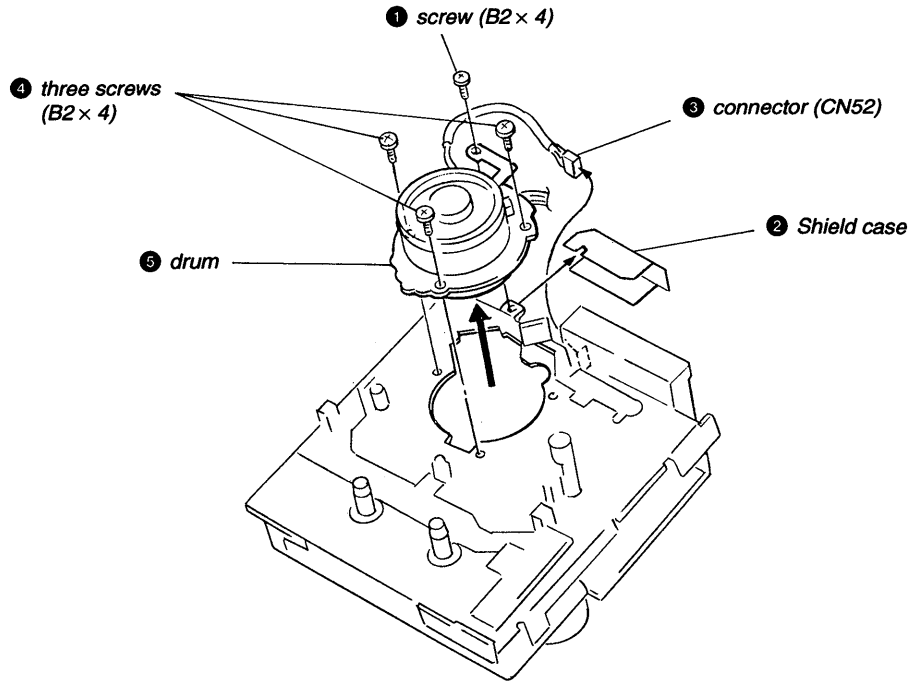
CASSETTE HOLDER ASSEMBLY



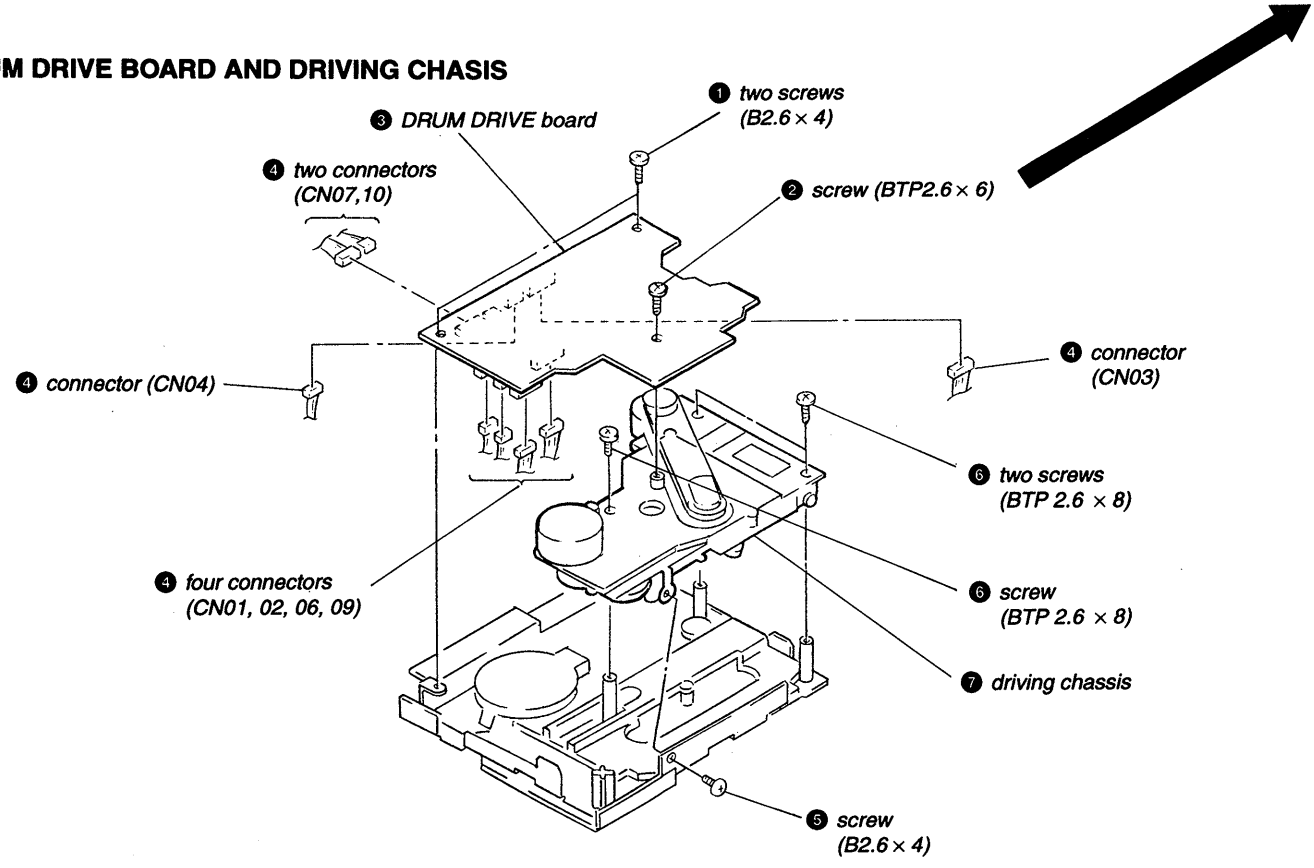
CASSETTE COMPARTMENT MOTOR


❾ cassette compartment motor
❽ two screws (P2.6 × 3)
❿ screw (B2.6 × 4)
❼ slider (rack)
❶ belt (driving)
❻ two screws (B1.7 × 3)
⓫ chassis (L)
❿ screw (B2.6 × 4)
❷ screw (B1.7 × 3)
❺ driving gear
❹ screw (B1.7 × 3)
❸ pulley

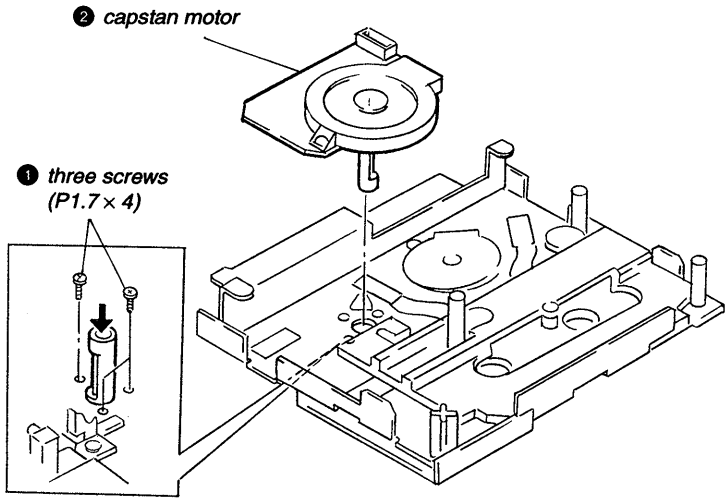
DRUM



DRUM DRIVE BOARD AND DRIVING CHASIS


❶ two screws (B2.6 × 4)
❸ DRUM DRIVE board
❹ two connectors (CN07,10)
❷ screw (BTP2.6 × 6)
❹ connector (CN04)
❹ connector (CN03)
❻ two screws (BTP 2.6 × 8)
❹ four connectors (CN01, 02, 06, 09)
❻ screw (BTP 2.6 × 8)
❼ driving chassis
❺ screw (B2.6 × 4)

CAPSTAN MOTOR



SECTION 3
ADJUSTMENTS

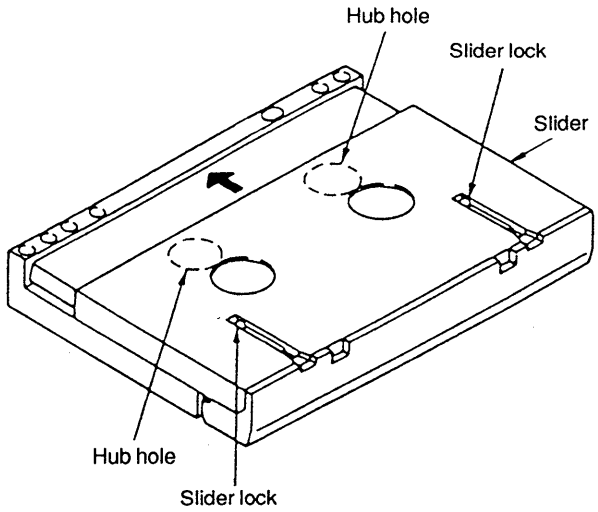
Notes When Making Adjustments

1. Adjustments should be performed in the order listed.
2. Use the following test tapes:
   TY-7111X (8-909-823-00) ..... Level
   TY-7252 (8-909-822-00) ..... Tracking
   TY-7551 (8-909-814-00) ..... Functions
   TY-30B (8-892-358-00) ..... Blank

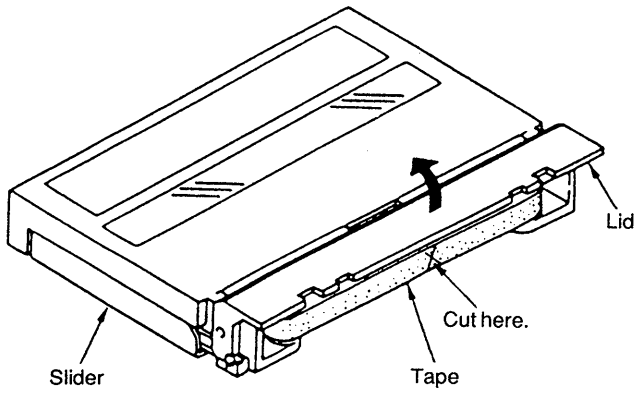
   Use the following torque meter:
   TW-7131 (8-909-708-71) ..... FWD

3. Switches and controls should be set as follows unless otherwise specified.
   TIMER switch : OFF
   REC MODE switch : LONG
   INPUT switch : COAXIAL
   SBM switch : OFF
   REC LEVEL control : Min.
   PHONE LEVEL control : Min.

4. Creating an end sensor cassette
   (1) Press the tape slider lock and move the slider in the direction indicated by the arrow.



   (2) Open the lid and cut the tape.



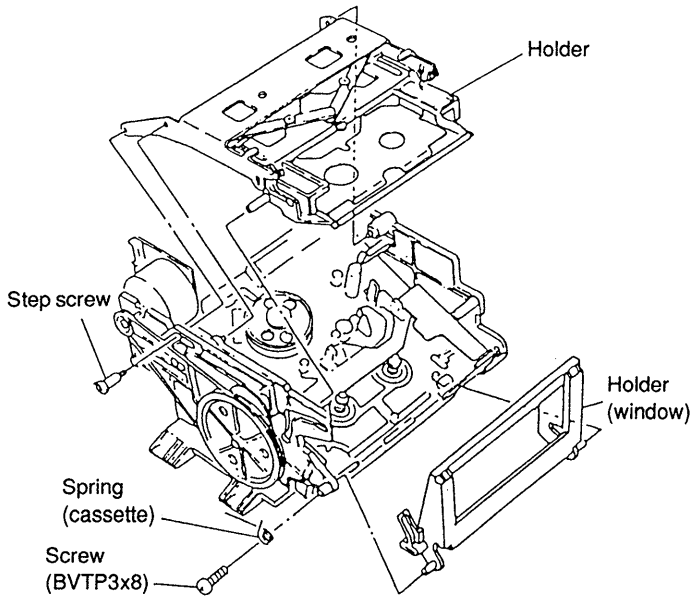
   (3) Turn the hubs until the tape is completely inside the cassette (both T and S sides).
   The end sensor cassette for end sensor adjustment is now ready for use.

5. Cleaning of the Revolving Drum
   (1) Fold a chamois (2-034-697-00) or a knit cloth into 4 or more files, slightly impregnate it with a cleaning liquid (9-919-573-00), and softly touch the drum with it and manually rotate the drum slowly counterclockwise by 2 to 3 turns for cleaning.
   (2) At that time, be careful not to move the chamois vertically to the head tip. Otherwise, the head tip may probably be damaged.

6. Be careful not to move RV1 to RV2 on the RF AMP board in the mechanism assembly.

7. To adjust the tape path and guides, remove the holder assembly as shown in the diagram and use the DAT holder jig (J-8000-002-A). This will make it easier to perform the adjustments.

   • First turning the pulley counterclockwise to put it in loading out status will make removal and reattachment of the holder assembly easier.
   • To perform adjustments, turn the pulley clockwise to put it in loading in status, load the cassette tape and set the IN switch to the ON position.



8. Test mode
   (1) Test mode (main)
   To set the test mode, short-circuit JW091 (X TEST) and ground of the main board. (At this time, the dB display of the fluorescent display level meter will blink.)

   Perfom the following adjustments in the test mode.
   • FWD torque adjustment
   • FWD back tension check
   • Tape path fine adjustments
   • DPG adjustment
   • AGC voltage check
   • End sensor check
   • To reset the test mode (main), disconnect the wire shorting JW091 (X TEST) and ground. After completion of adjusting, be sure to reset the test mode (main).

(2) Test mode (display)
Setting:
TIMER switch : Center click
INPUT switch : Center click
REC MODE switch : Center click

1) Disconnect CN901 and CN902 of the main board after turning off the power supply.
2) Short-circuit the testland (TEST) and ground of the display board.
3) To check the fluorescent display, insert CN901 and CN902 and turn on the power.

Each grid of the fluorescent display tube sequentially lights up while all tubes being lighted up finally.

≥

Level meters go out one after one.

≥

When all the level meter go off, the NEXT RMC will be displayed.

≥

Every time the panel switch is operated, one level meter goes off from the left, the dB display of level meter will be disappeared finally.

≥

The NEXT RMC will be displayed when the STOP (■) button is pressed.

- To reset the test mode, turn the power off and disconnect the wire shorting test land (TEST) and ground.

9. Check the following items for correct tape speed, after completion of adjusting.
   (1) Set thc REC MODE switch to 48k and check for normal recordlng and playback. (xl)
   (2) Set the REC MODE switch to LONG and check for normal recording and playback. (x0.5)
   (3) With QUE (▶+▶▶) or REVIEW (▶+◀◀), check that qurrr, qurrr sound is heard. (x3, x8)
   (4) Check that correct time is displayed after FF (▶▶) or REV (◀◀). (xl6)
   (5) Check that AMS (▷▷I, I◁◁) is normal.

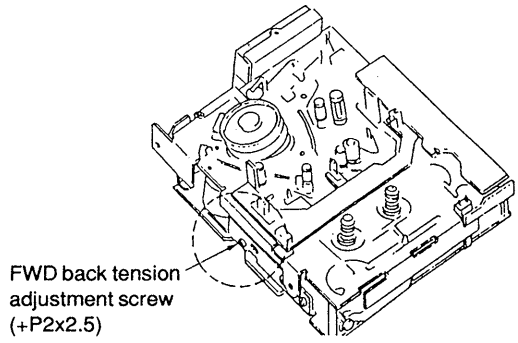
3-1. ELECTRICAL ADJUSTMENTS

FWD Torque Adjustment

Procedure :
1. Set the test mode (main) and load the FWD torque meter TW-7131 (8-909-708-71).
2. Set the PLAY (▶) mode. "TORQUE" will be displayed on the fluorescent indicator tube.
3. Adjust RV451 so that the minimum value of FWD take up torque (take-up side rewinding torque) is between 9 – 10g • cm (0.13 – 0.14 oz • inch).
   Also, make sure that the maximum reading does not exceed 15g • cm (does not exceed 0.21 oz • inch).
4. Confirm that the value indicated by the torque meter is maintained for one full cycle.

FWD Back Tension Check and Adjustment

Check procedure :
1. Put the set into the test mode (main • servo) and load the FWD torque meter TW-7131 (8-909-708-71).
2. Put the set into the PLAY (▶) mode.
3. Turn the FWD back tension adjustment screw locked on the mechanical deck side so that the minimum value of FWD back tension torque (supply side) is between 4.5 to 7.5g • cm – (0.06 – 0.1 oz • inch).
   Also, make sure that the maximum reading does not exceed 8g • cm (does not exceed 0.11 oz • inch).
   After completion of adjusting, be sure to apply screw lock.
4. Confirm that value indicated by the torque meter is maintained for one full cycle.
5. If the specified values are not satisfied, replace the lever (BT) assembly (X-3363-024-1).

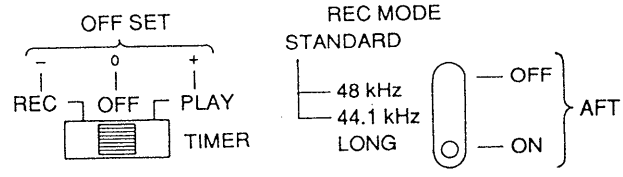


To tighten (clockwise) — back tension becomes larger.
To loosen (counterclockwise) — back tension becomes smaller.

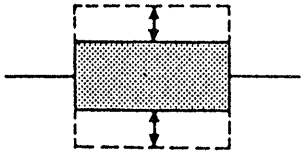
Tape Path Fine Adjustments (x1.5 FWD Mode)

Perform the following adjudtment when the drum has been replaced.

Procedure:
1. Connect an oscilloscope CH-l to JW183 (PBRF) and CH-2 to JW092 (SWP) on the main board.
2. Set the test mode (main) and load test tape TY-7252 (8-909-822-00).
3. Press the AMS (▷▷I) key. "DPG" will be displayed on the fluorescent indicator tube.
   Each part of switches on Test Mode.

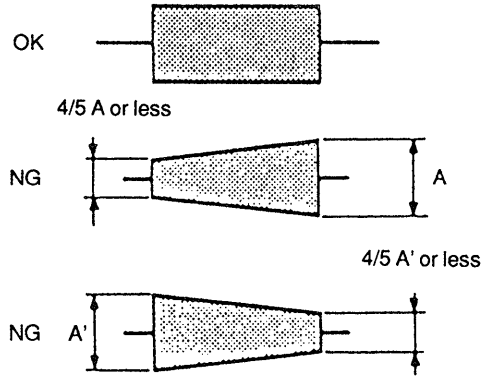


4. With the REC MODE switch set to 48kHz (ATF: OFF) and the TIMER switch set to PLAY or REC (OFFSET: + or –), fine adjust the Sl and Tl guides so that the oscilloscope RF signal waveform remains the same when high-low is repeated.

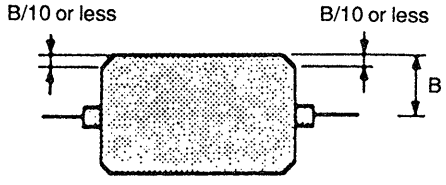


* Finish the adjustment by screwing in.

5. Check the RF signal waveform with the REC MODE switch set to LONG (ATF: ON) and the TIMER switch set to PLAY or REC (OFFSET: + or –).



6. Check the RF signal waveform with the REC MODE switch set to LONG (ATF: ON) and the TIMER switch set to OFF (OFFSET: 0).
   (1) Confirm that the RF signal wavefonn peak value (B) is 60 mV or more.
   (2) Confirm that the undershoot level of the RF signal waveform's flat portion is within 10%.



7. When the measured values are not within the above tolerance repeat items 3 – 6 above.

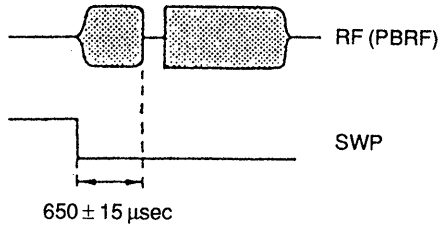
Adjustment Point : Mechanism assembly

DPG Adjustment

Perform the following adjustment without fail when the drum has been replaced.

Procedure:

1. Connect oscilloscope CH-1 to JW183 (PBRF) and CH-2 to JW092 (SWP) on the main board. (Use CH-2 as the trigger. When the CH-2 signal is inverted, the trailing edge can be used for synchronization.)
2. Set the test mode (main) and load test tape TY-7252 (8-909-822-00).
3. Set the REC MODE switch to LONG (ATF: ON) and the TIMER switch to OFF (OFFSET: 0).
4. Press the AMS (▶▶I) key. "DPG" will be displayed on the fluorescent indicator tube.
5. Press the ◀◀ and ▶▶ keys as appropriate so that the gap between the oscilloscope SWP and RF signals becomc 650 ± 15 µsec.
   (Hold the ◀◀ and ▶▶ keys down for more than 1 second to perform rough adjustment. Hold them down for approximately 0.2 seconds for fine adjustment, and the auto adjustment can be performed pressing ▶ key.

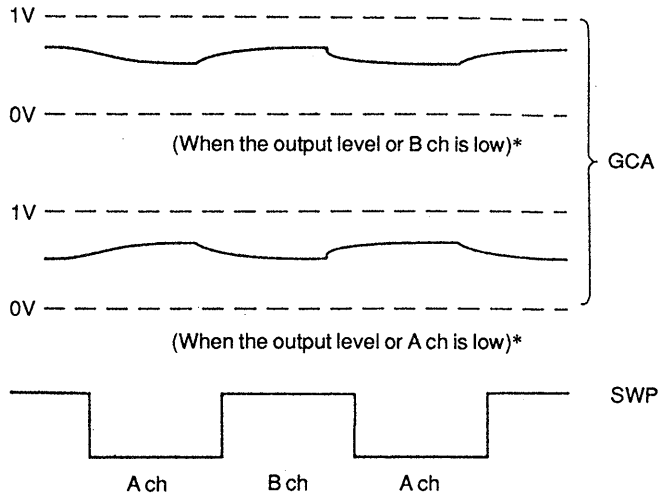


AGC Voltage Check

Perform this adjustment after cleaning the heads with a cleaning cassette.

Procedure:

1. Connect oscilloscope CH-l to JW247 (GCA: Gain Control Amp.) and CH-2 to JW092 (SWP) on the main board. (When the CH-2 signal is inverted, the trailing edge can be used for synchronization.)
2. Set the test mode (main) and load test tape TY-7111X (8-909-823-00).
3. Set the PLAY (▶) mode and check that the GCA waveform on the oscilloscope is as follows.



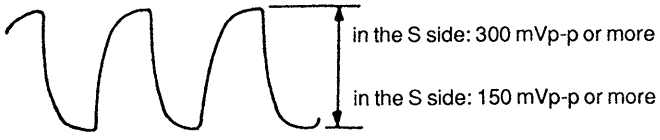
* Slightly changes depending on the state of the head. NG if the GCA waveform is 1V or more or equal to the ground level.

End Sensor Check

Perform the following adjustment when the holder has been removed or part of the mechanism deck section replaced.

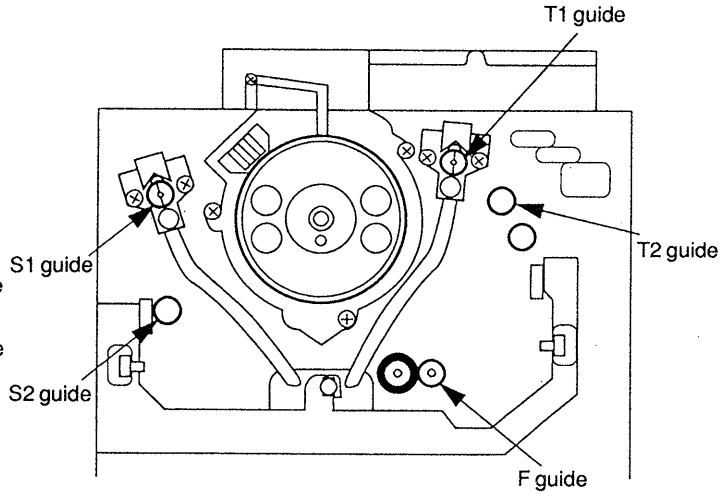
Procedure:

1. Connect an oscilloscope to the JW158 (SEND: in the S side) and JW143 (TEND: in the T side) of the main board.
2. Set the test mode (main), mount an end sensor cassette and effect the STOP (■) mode.
3. Check that p-p values of waveform of the oscilloscope satisfy the following.



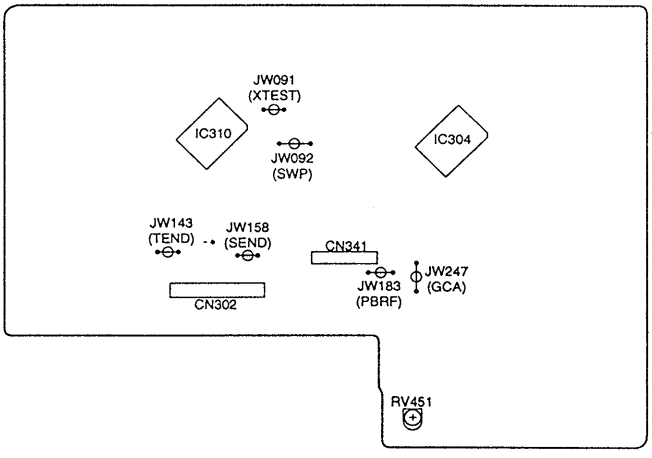
Adjustment Location :

— Mechanism assembly —

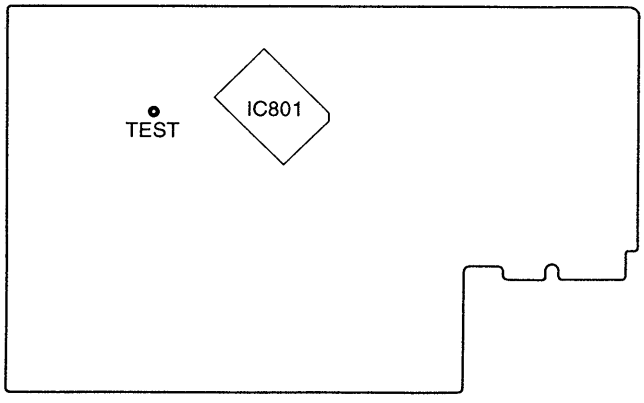


Adjustment Location :

[MAIN BOARD] (Component side)



[DISPLAY BOARD] (Conductor side)



SECTION 4
DIAGRAMS

Note:

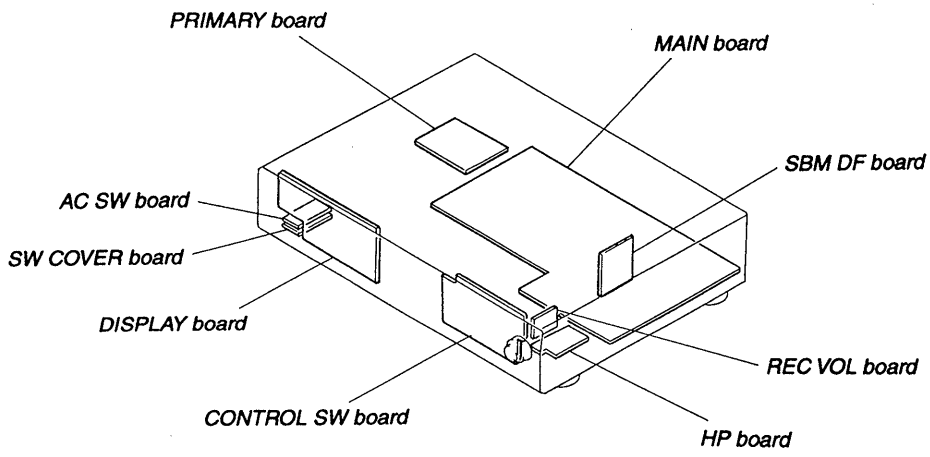
- **MODIFICATION DUE TO ADDITION OF THE DETECTION BOARD (AEP, UK model only)**
  As the DETECTION board was added during the production. According to this change the suffix number of the DRUM DRIVE board has been changed from [15] to [16]. (The pattern has not been changed.)
  Depending on whether the DETECTION board is present or not, some circuits must be changed. For replacing parts, refer to the table below.

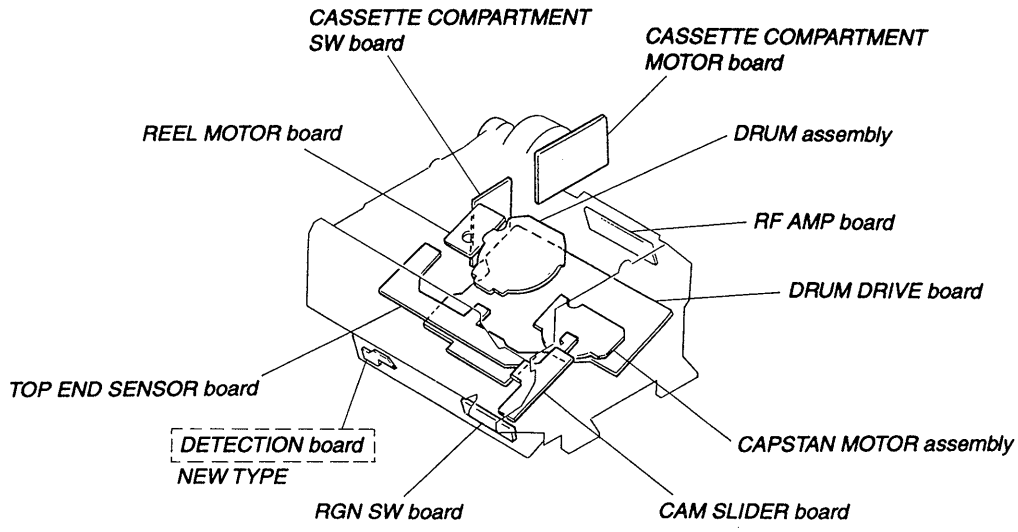
- Difference List

FORMER TYPE Unit without DETECTION board (DRUM DRIVE board suffix No. [14] or [15])						FORMER TYPE Unit with DETECTION board (DRUM DRIVE board suffix No. [16])
Ref. No.	Part No.	Description				
	*** DRUM DRIVE BOARD ***					*** DRUM DRIVE BOARD ***
JW06	1-216-296-00	METAL CHIP	0	5%	1/8W	Not used

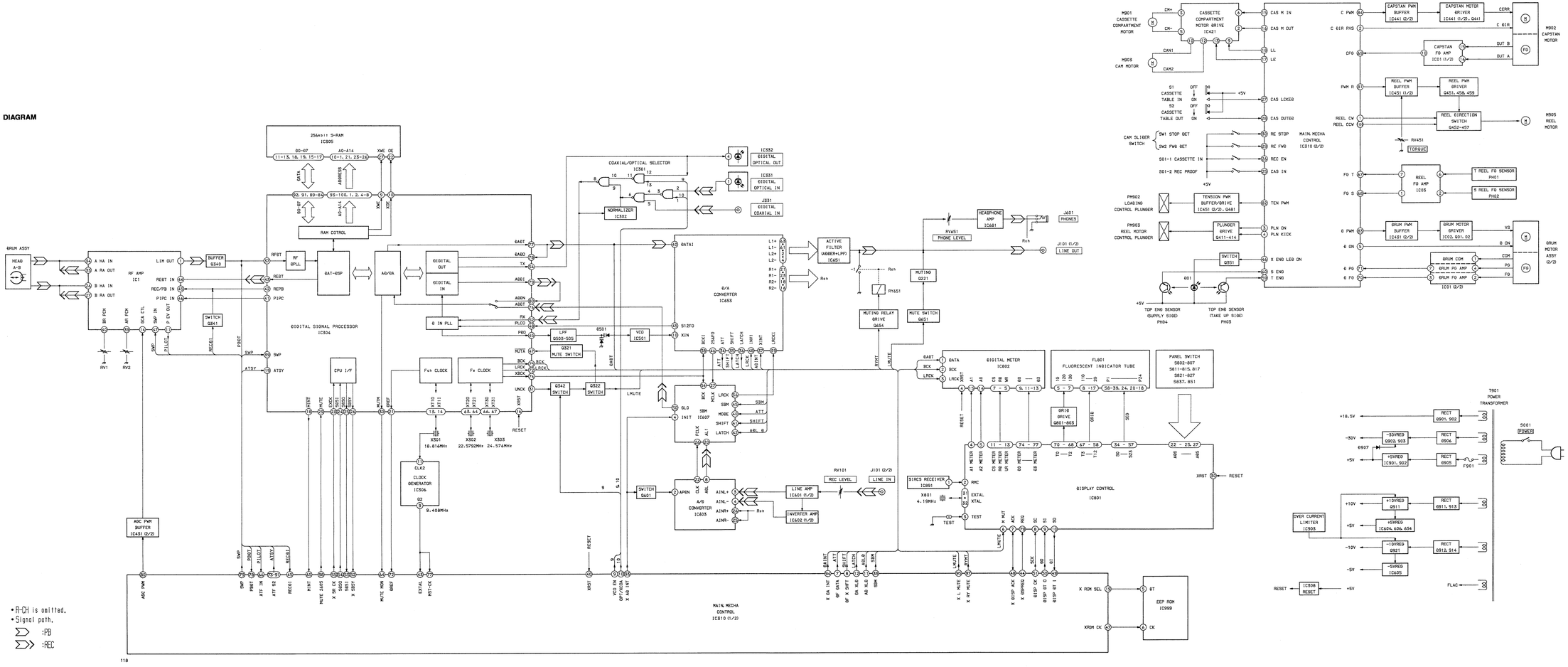
Note: When replacing the DRUM DRIVE board, check JW06 is present or not.
- If an unit without DETECTION board is not equipped with JW06, the unit dose not operate correctly.
- JW06 in not needed for an unit with DETECTION board. In case the DRUM DRIVE board for replacement has JW06, it should be eliminated.

- **Circuit Boards Location**

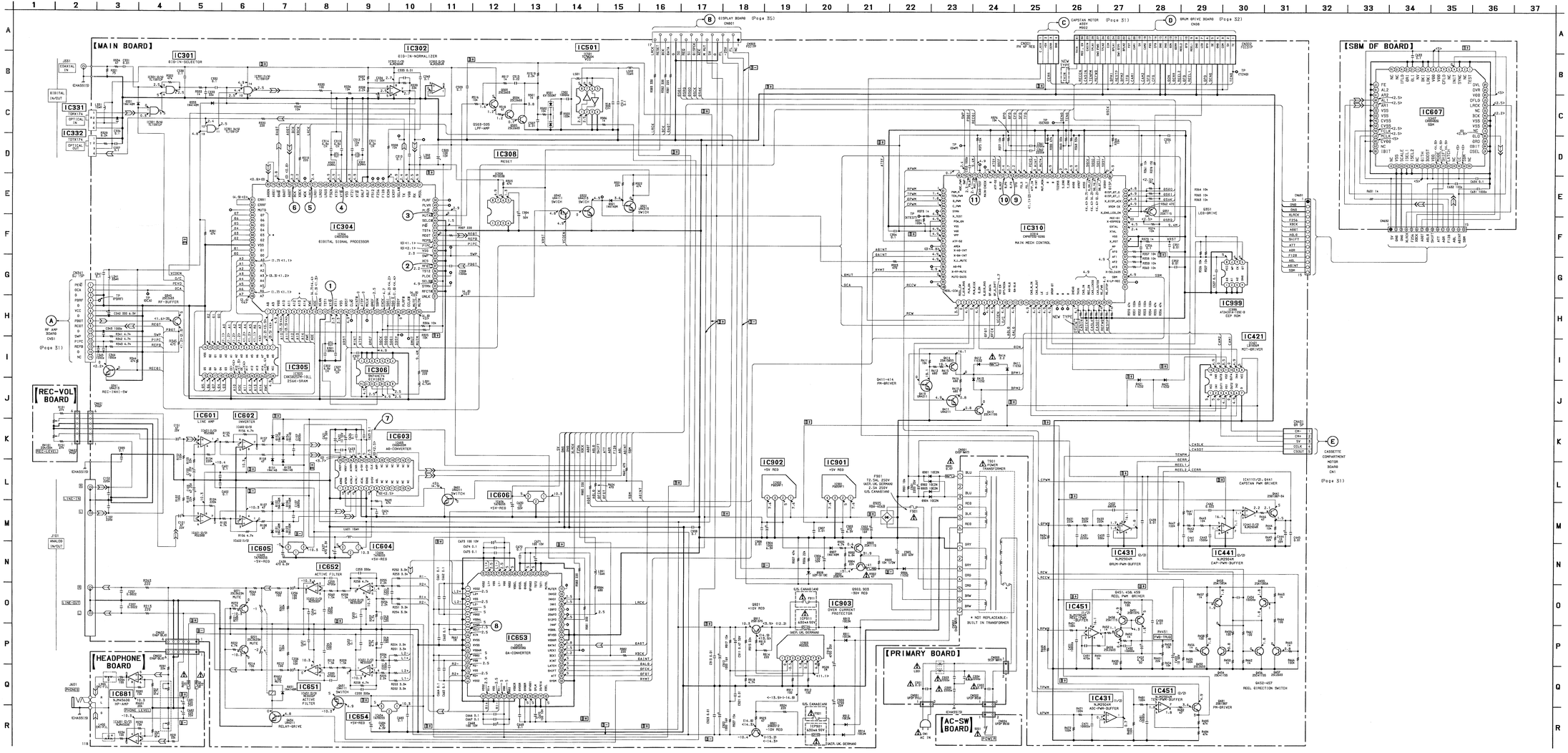




4-1. BLOCK DIAGRAM



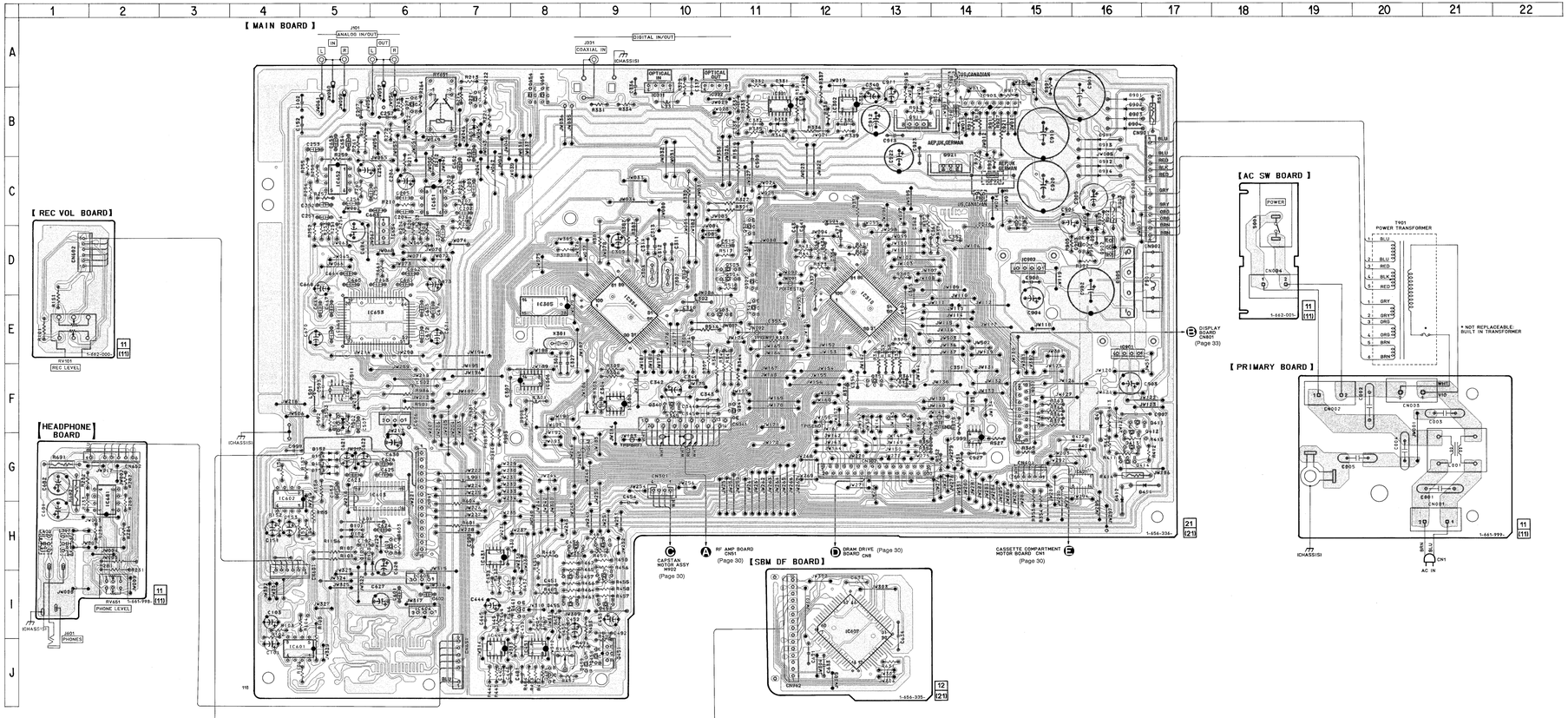
4-2. SCHEMATIC DIAGRAM — MAIN Section — • See page 38 for IC Block Diagrams.



Note:
- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- △ : internal component.
- : fusible resistor.

Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- : B+ Line.
- : B- Line.
- : panel designation.
- : adjustment for repair.
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  : PB
  : REC



• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D101	H-5	IC603	G-6
D102	H-5	IC604	I-6
D103	H-6	IC605	I-6
D104	H-5	IC606	F-6
D151	G-5	IC607	I-12
D152	G-5	IC651	C-5
D153	G-5	IC652	C-5
D154	G-5	IC653	E-6
D321	D-11	IC654	D-6
D331	B-11	IC681	G-2
D333	B-11	IC901	E-16
D411	G-17	IC902	D-15
D412	H-16	IC903	B-14
D413	F-15	IC999	G-14
D421	G-16		
D422	G-16	Q221	B-7
D501	F-5	Q271	B-6
D651	B-7	Q321	D-11
D901	B-16	Q322	D-11
D902	B-16	Q340	F-10
D903	B-16	Q341	F-11
D904	B-16	Q342	E-11
D905	D-16	Q351	F-13
D906	C-16	Q411	F-15
D907	D-15	Q412	G-16
D908	D-16	Q413	G-16
D911	B-16	Q414	G-16
D912	C-16	Q441	I-8
D913	B-16	Q451	J-9
D914	C-16	Q452	I-9
		Q453	I-9
IC301	B-11	Q454	H-9
IC302	B-12	Q455	I-8
IC304	E-9	Q456	H-8
IC305	E-8	Q457	I-8
IC306	F-8	Q458	J-8
IC308	F-9	Q459	J-8
IC310	E-13	Q481	J-8
IC331	B-10	Q503	E-10
IC332	B-10	Q504	D-11
IC421	G-16	Q505	D-11
IC431	H-7	Q651	B-8
IC441	J-7	Q654	B-8
IC451	I-8	Q902	D-16
IC501	F-5	Q903	D-16
IC601	J-5	Q911	B-13
IC602	G-4	Q921	C-14

Note:

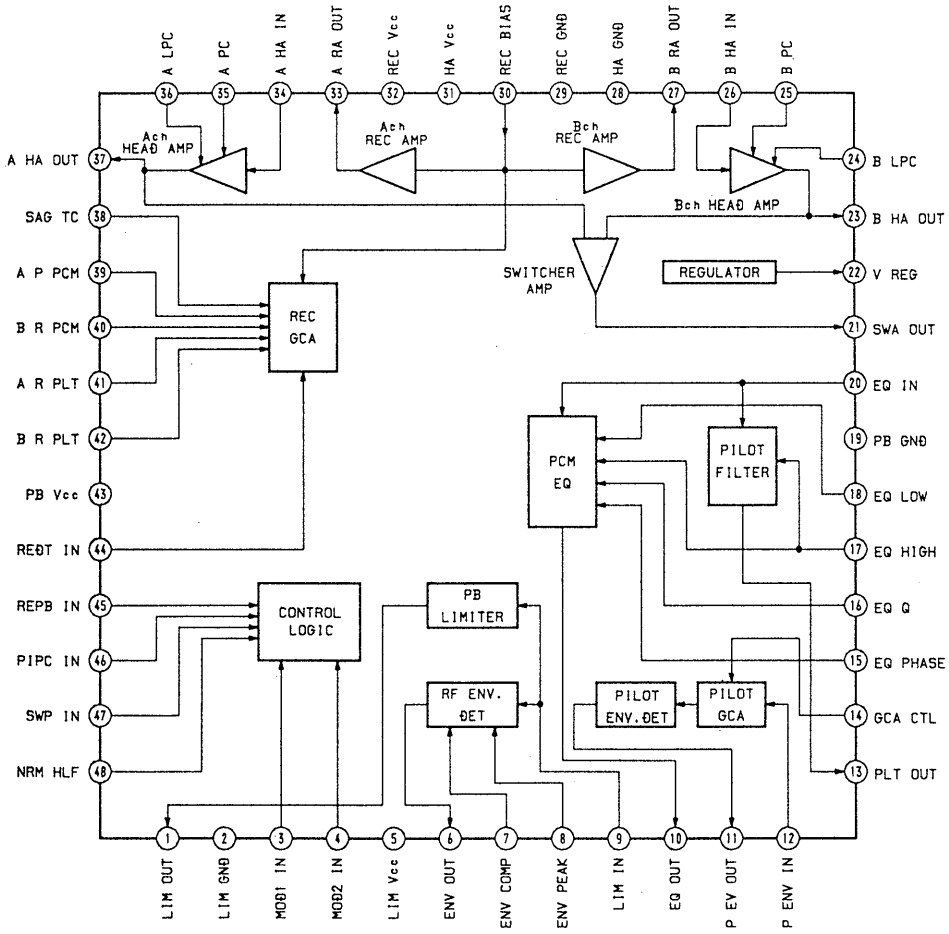
- ⟷ : parts extracted from the component side.
- △ : internal component.
- ▨ : Pattern from the side which enables seeing.

• Waveforms

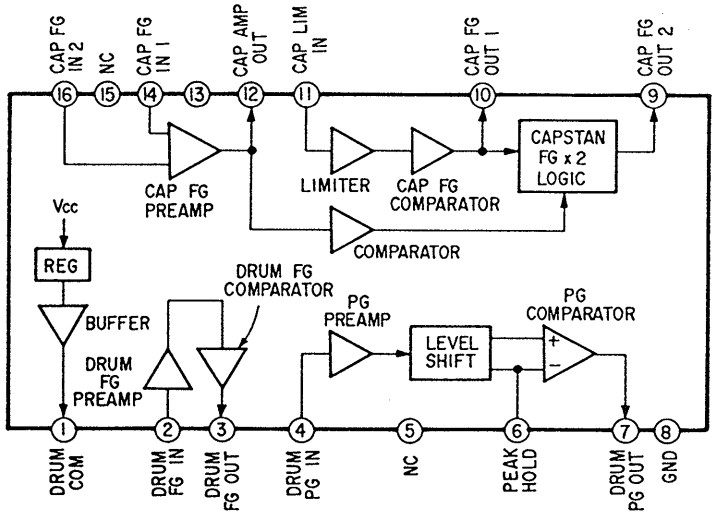
1. 18.814MHz, 4.6Vp-p — IC304 (13) (XTI0)
2. 0.8Vp-p, 5Vp-p — IC304 (37) (39) (RFDT,SWP) PB mode
3. 16.384MHz, 4.6Vp-p — IC304 (48) (PLCO)
4. 24.575MHz, 5Vp-p — IC304 (66) (XT30)
5. 32kHz, 5.2Vp-p — IC304 (72) (LRCK)
6. 2.048MHz, 5Vp-p — IC304 (75) (BCK)
7. 4.096MHz, 5.4Vp-p — IC603 (22) (CLK)
8. 16.384MHz, 5.4Vp-p — IC653 (9) (X OUT)
9. 1.25msec, 4.8Vp-p — IC310 (70) (D FG) PB mode
10. 2V, 4.8Vp-p — IC310 (71) (D PG) PB mode
11. 9.407MHz, 6.7Vp-p — IC310 (77) (MST-CK)

- **IC Block Diagrams**

IC1 CXA1364R



IC01 CX20115-T4

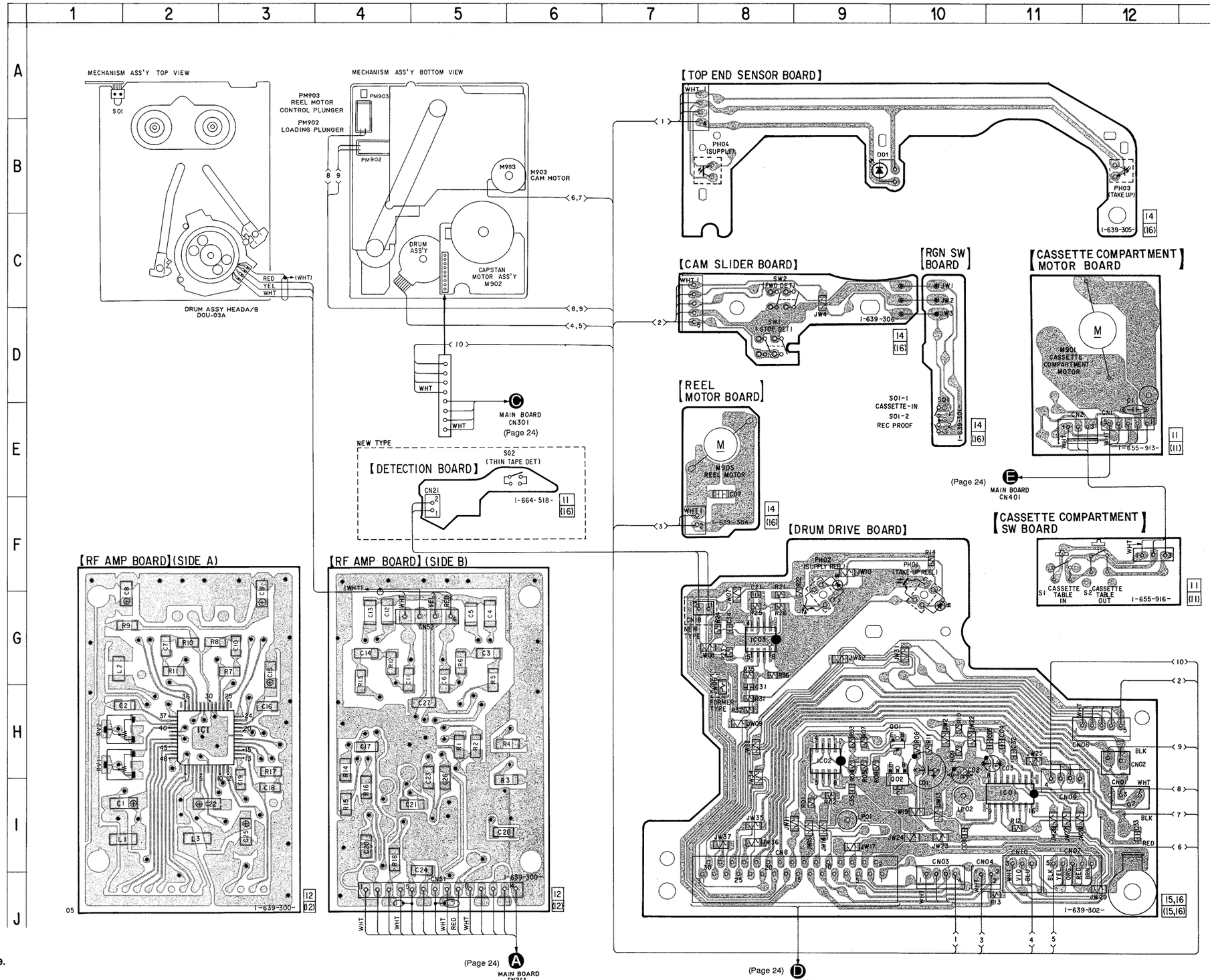


4-4. PRINTED WIRING BOARDS — MD Section —

• See page 12 for Circuit Boards Location.

• **Semiconductor Location**

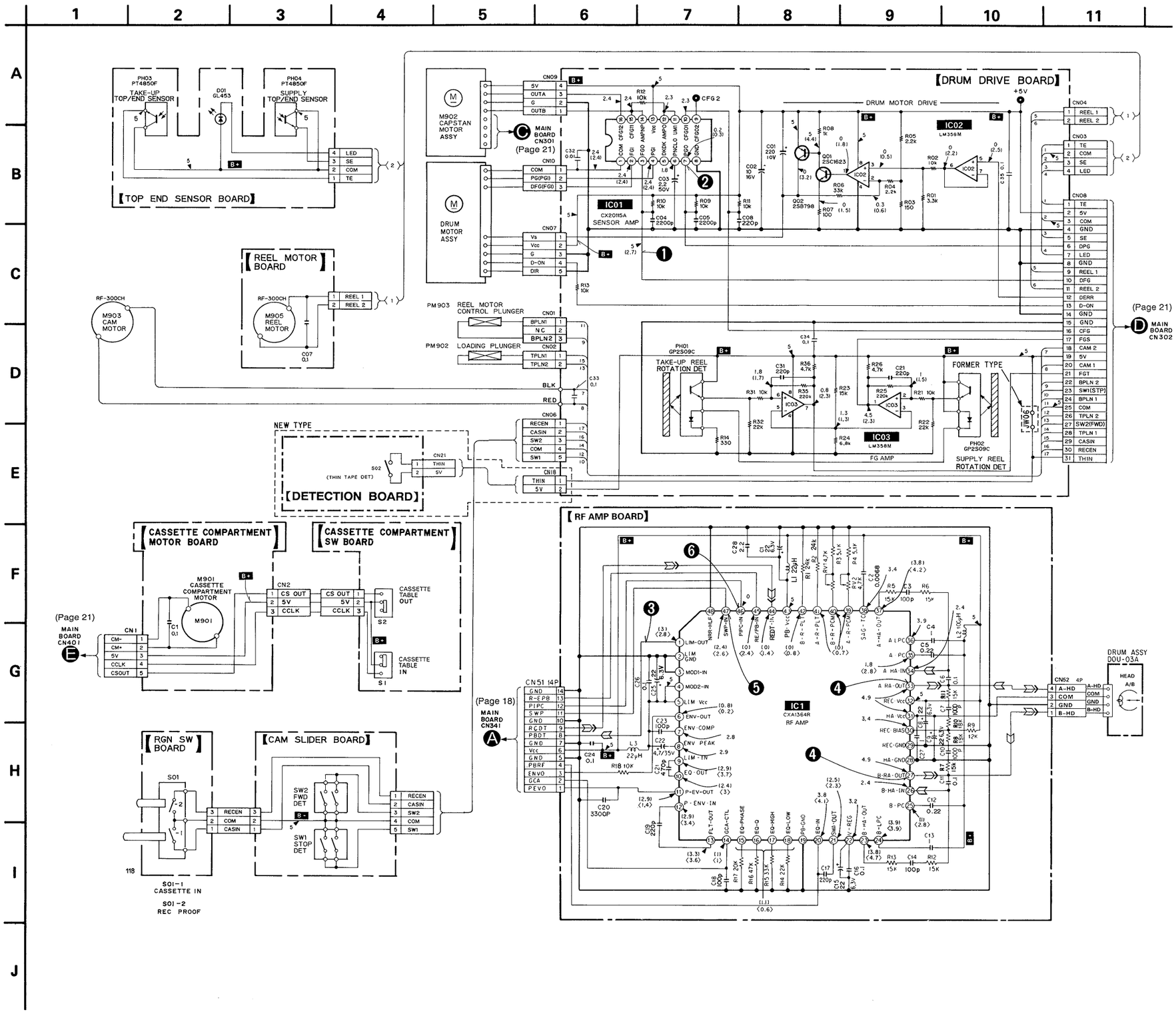
Ref. No.	Location
D01	B-9
IC1	H-2
IC01	I-11
IC02	H-9
IC03	G-8
PH01	G-10
PH02	G-9
PH03	B-12
PH04	B-8
Q01	H-10
Q02	H-10



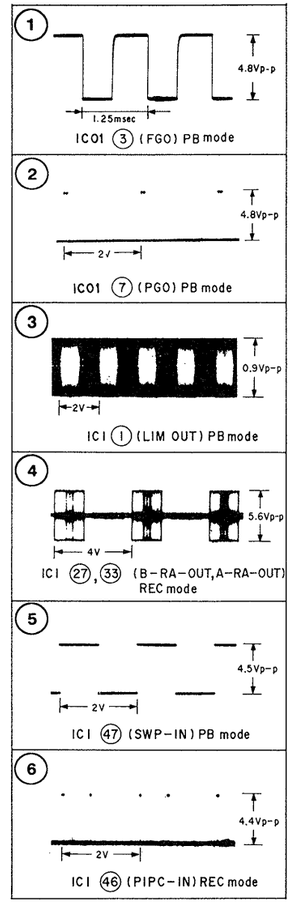
Note:

- ——o : parts extracted from the component side.
- ● : Through hole.
- ▒▒ :Pattern from the side which enables seeing. (The other layers' patterns are not indicated.)

4-5. SCHEMATIC DIAGRAM — MD Section —



• **Waveforms**

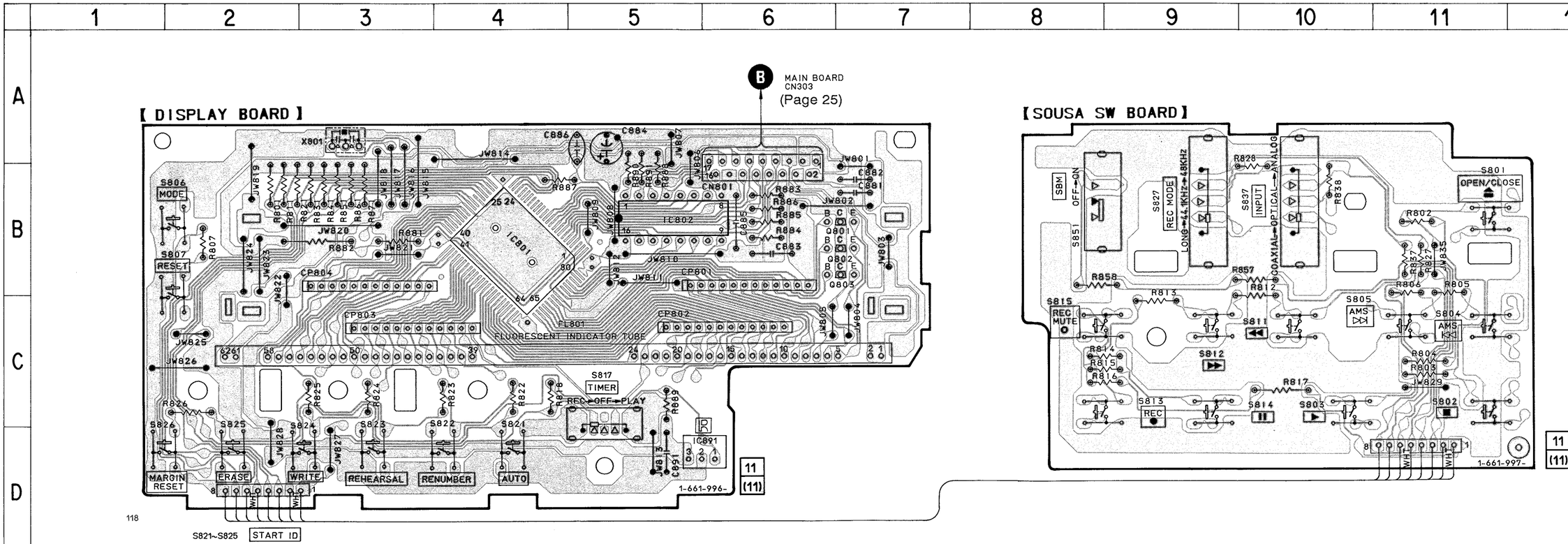


Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- B+ : B+ Line.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark : REC/PB
  ( ) : PB
  < > : REC
  * : Impossible to measure the voltage at the marked points.
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ▷ : PB (DECK A)
  ▷▷ : REC (DECK A)

4-6. PRINTED WIRING BOARDS — DISPLAY Section —

• See page 12 for Circuit Boards Location.



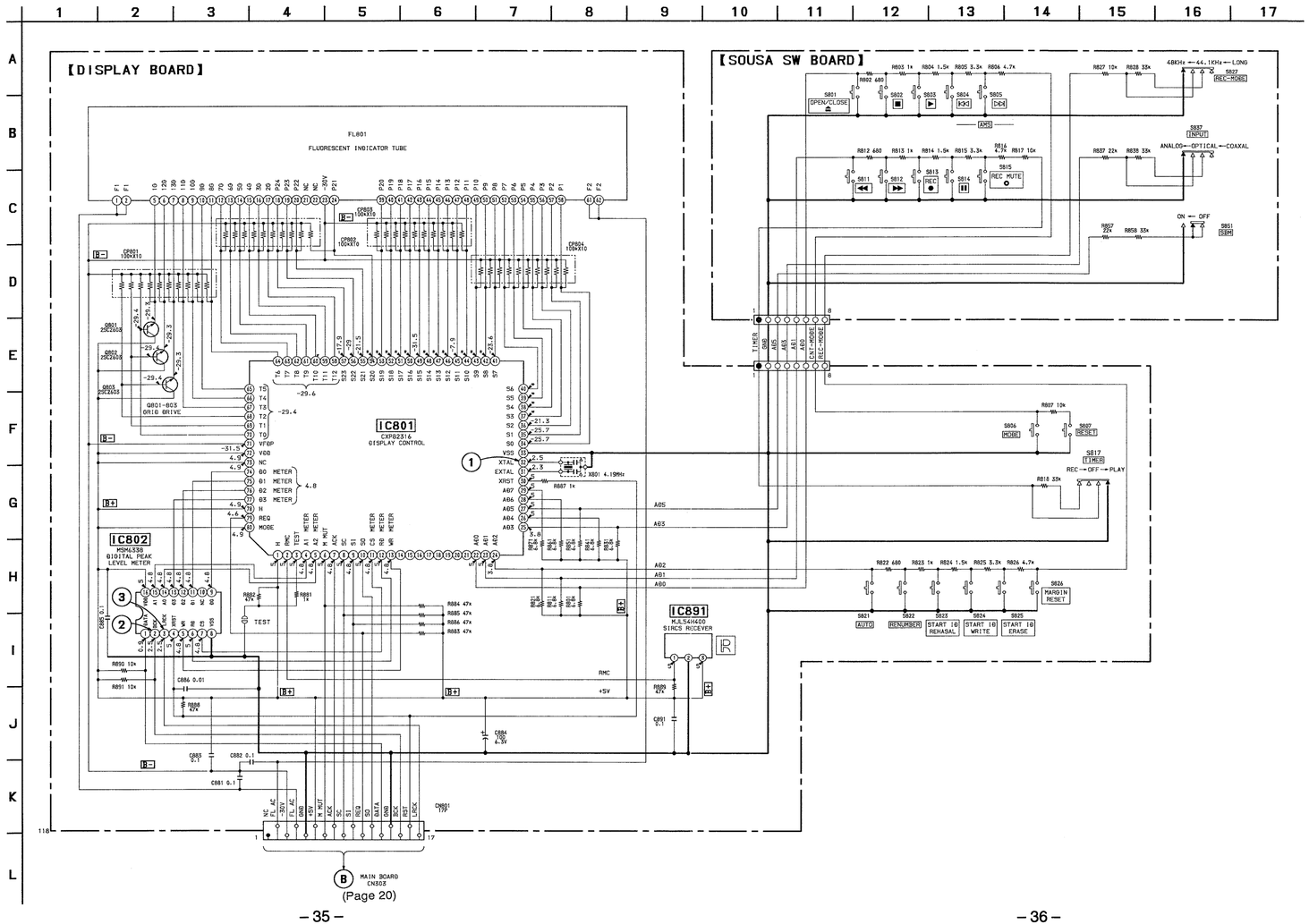
• **Semiconductor Location**

Ref. No.	Location
IC801	B-4
IC802	B-5
IC891	D-5
Q801	B-7
Q802	B-7
Q803	B-7

Note:

- ⟜——: parts extracted from the component side.
- △ : internal component.
- ▒▒▒ :Pattern from the side which enables seeing.

4-7. SCHEMATIC DIAGRAM — DISPLAY Section —

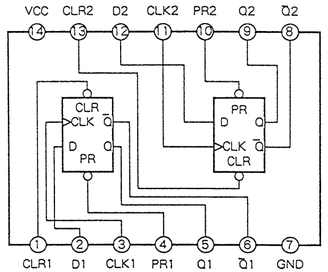


Note:

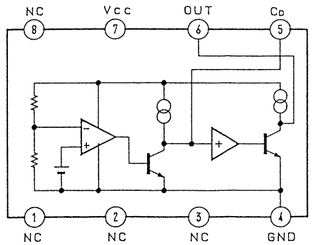
- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- △ : internal component.
- ▭ : panel designation.
- B+ : B+ Line.
- B− : B- Line.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark : PB /REC
  ＊ : can not to be measured.
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.

4-8. IC BLOCK DIAGRAMS — MAIN Section —

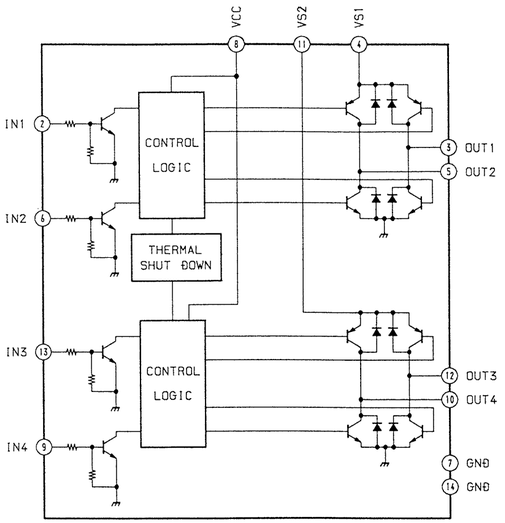
IC306 SN74HC74ANS



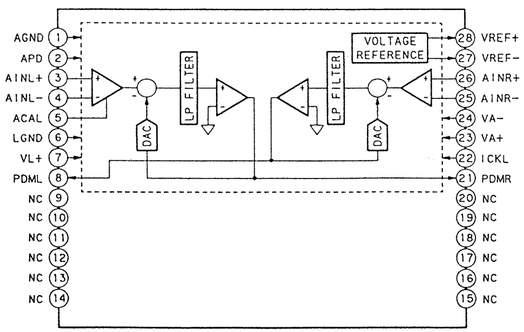
IC308 M51953BFP



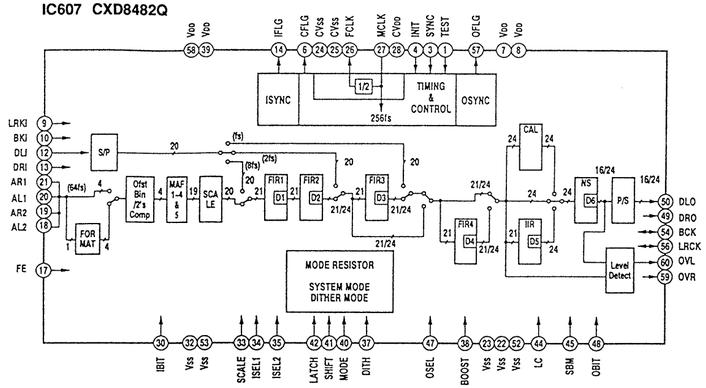
IC421 LB1836M



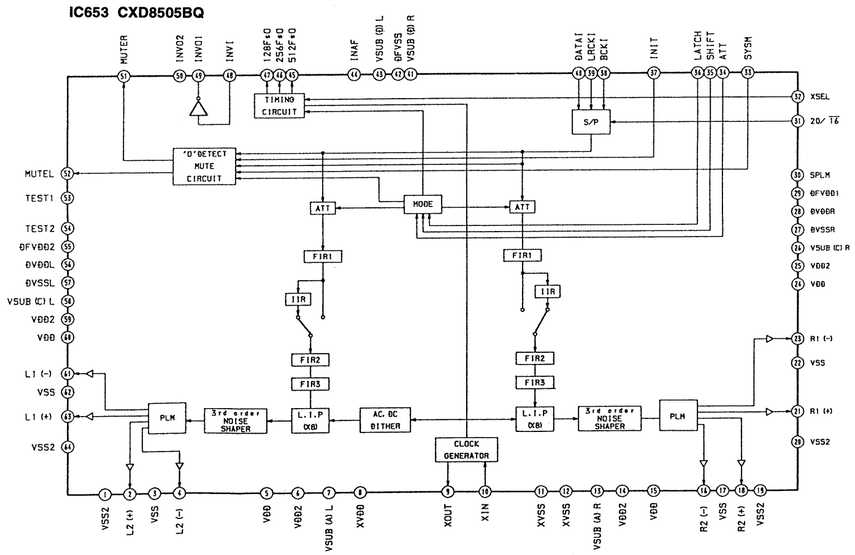
IC603 CXD8493M



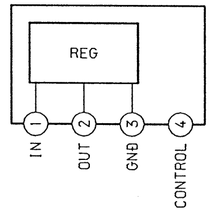
IC607 CXD8482Q



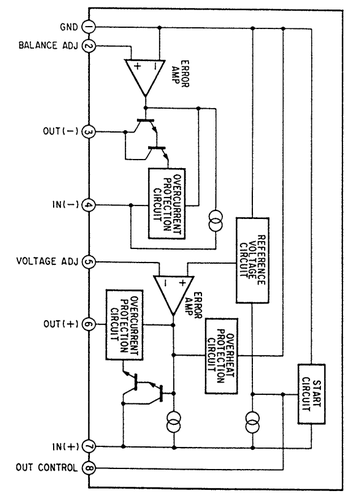
IC653 CXD8505BQ



IC901, 902 PQ05RF1



IC903 M5230L



4-9. IC PIN FUNCTION DESCRIPTION

• MAIN BOARD IC304 CXD2605Q (DIGITAL SIGNAL PROCESSOR)

Pin No.	Pin Name	I/O	Function
1, 2	A8, A9	O	External RAM address output
3	VDD	–	Power supply (+5V)
4 to 8	A10 to A14	O	External RAM address output
9	XWE	O	External RAM write enable signal output
10	XOE	O	External RAM output enable signal output
11	XEAN	O	Not used (Open).
12	TST1	I	Test pin. Fixed to "L".
13	XTIO	O	Crystal oscillation circuit 1 output
14	XTII	I	Crystal oscillation circuit 1 input
15	VSS	–	Ground
16	XRST	I	Reset input. "L": Reset.
17	CLKO	O	Not used.
18	$\overline{\text{MINT}}$	O	Control byte (1) bit 1="L": Q code decode (Detecting between songs) output, "H": BCK clock output by RX-PLL.
19	ATSY	I	ATF sync signal input
20	MCLK	O	Not used.
21	DREF	O	SBSY period, duty 50 signal output
22	SBPM	O	Not used (Open).
23	EXCK	I	Data transfer clock input for MAIN, MECHA CONTROL (IC310)
24	SDSI	I	Serial data input from MAIN, MECHA CONTROL (IC310)
25	SDSO	O	Serial data output to MAIN, MECHA CONTROL (IC310)
26	SBSY	O	Frame sync signal output for transferring data with MAIN, MECHA CONTROL (IC310)
27	$\overline{\text{PLRF}}$	O	Not used (Open).
28	$\overline{\text{CCLK}}$	O	Not used.
29	MUTE	I	Mute input. "H": Mute. Not mute REC monitor sound.
30	MUTM	O	Mute monitor. "H": Indicates muting occurs.
31	UNLK	O	RXPLL lock monitor signal output. "L": Indicates locking occurs.
32	$\overline{\text{RFCT}}$	I	Playback RF signal control ("L": Valid, "H": Invalid) (Connected to Ground)
33	SYMN	O	Outputs monitor signal for C1 check results corresponding to RF.
34	$\overline{\text{SELB}}$	I	Test pin. Fixed to "H".
35	PLCK	O	Not used.
36	TST2	I	Test pin. Fixed to "L".
37	RFDT	I	Playback RF signal input
38	XCS	I	Chip select input for data transfer with microprocessor. "L": Transfer enable. (Connected to Ground)
39	SWP	I	RF switching pulse. "L": A track, "H": B track.
40	VSS	–	Ground
41	PIPC	O	ATF pilot signal/discrimination signal output for record signal. "H": Pilot signal.
42	REPB	O	REC/PB discrimination signal output. "H": REC.
43	REDT	O	Record signal output
44	TST4	I	Test pin. Fixed to "L".
45	PDO	O	RXPLL phase comparator output

Pin No.	Pin Name	I/O	Function
46	$\overline{\text{SELC}}$	I	Oscillation frequency select signal input (Connected to Ground)
47	$\overline{\text{MUTA}}$	I	Mute input. "H": Mute. Also mutes REC monitor sound.
48	PLCO	I	RXPLL external VCO clock input (512 fs as reference)
49	PLVR	O	Not used (Open).
50	PLRF	O	Not used.
51	MSSL	I	Master mode/slave mode select. "H": Master.
52	RX	I	Digital interface signal input
53	V_{DD}	–	Power supply (+5V)
54	TX	O	Digital interface signal output
55	$\overline{\text{SELA}}$	I	Test pin. Fixed to "H".
56	EXSY	I/O	External sync signal input/output
57	EXSN	I/O	
58	F128	I/O	Not used.
59	F256	O	
60	F512	O	
61	ADLF	I	ADTT, ADDI, ADDN serial data LSB/MSB first select input. "H": LSB first. (Connected to Ground)
62	DALF	I	DADT, DADO serial data LSB/MSB first select input. "H": LSB first. (Connected to Ground)
63	XT2O	O	Crystal oscillation circuit 2 output
64	XT2I	I	Crystal oscillation circuit 2 input
65	VSS	–	Ground
66	XT3O	O	Crystal oscillation circuit 3 output
67	XT3I	I	Crystal oscillation circuit 3 input
68	FSEN	I	F128, BCK, LRCK input/output select input. "H": Output. Fixed to "H".
69	LR03	O	Inverted signal of LRCK 16 BCK delay output.
70	LR02	O	Not used (Open).
71	LR01	O	
72	LRCK	I/O	fs/2 fs (At 2 × speed) signal input/output
73	WCK	O	Not used.
74	XBCK	O	Outputs inverted signal of BCK
75	BCK	I/O	64 fs/128 fs (At 2 × speed) signal input/output
76	ADDT	I	A/D serial data input
77	DADT	O	D/A serial data output
78	DADO	I	Audio data input for digital OUT
79	ADDI	O	Digital IN audio data output
80	ADDN	I	Digital IN audio data input
81	ERRI	I	Validity flag data input for digital OUT
82	ERRF	O	DADT data compensation data/discrimination signal output. "H": Compensation data.
83	MUTG	O	Not used.
84	D7	I/O	External RAM data input/output (MSB)
85 to 89	D6 to D2	I/O	External RAM data input/output
90	Vss	–	Ground
91	D1	I/O	External RAM data input/output
92	D0	I/O	External RAM data input/output (LSB)
93 to 100	A0 to A7	O	External RAM address output

• MAIN BOARD IC 310 CXP87532-028Q (MAIN, MECHANISM CONTROL)

Pin No.	Pin Name	I/O	Function
1	REEL CW	O	Reel motor CW output. "H": FWD direction.
2	C DIR RVS	O	Capstan direction control output. "L": FWD, "H": RVS
3	PLN ON	O	Brake plunger ON control output.
4	PLN KICK	O	Brake plunger kick control output.
5	D ON	O	Drum motor ON control output.
6	D DIR RVS	O	Not used.
7	DF DATA	O	Communication line (Serial data) with Digital filter.
8	DF X SHFT	O	Communication line (Shift clock) with Digital filter. "L": shifted, "H": taken
9	VCO EN	O	Digital signal control output. "L": Digital input REC
10	OPT/XCOA	O	Digital input switch output. "L": coaxial, "H": optical
11	AD XLD	O	Load to Digital filter for A/D converter.
12	DA XLD	O	Load to Digital filter for D/A converter.
13	——	–	} Not used (Open).
14	——	–	
15	CAS M IN	O	Cassette compartment motor rotation direction control output. IN direction.
16	CAS M OUT	O	Cassette compartment motor rotation direction control output. OUT direction.
17	LE	O	Loading motor rotation direction control output. Eject direction.
18	LL	O	Loading motor rotation direction control output. Loading direction.
19	X ROM DT	O	ROM data output to EEPROM (IC999).
20	——	–	} Not used.
21	——	–	
22	——	–	
23	2 HEAD	I	Head select. Fixed to "H"
24	THIN	I	Detect kinds of tapes. "H": normal tape, "L": Thin tape. Fixed to "H"
25	CAS IN	I	Cassette IN switch input.
26	REC EN	I	REC enable switch input.
27	CAS LCKED	I	Cassette compartment lock switch input.
28	CAS OUTED	I	Cassette compartment out switch input.
29	RE FWD	I	Encoder SW2 input.
30	RE STOP	I	Encoder SW1 input.
31	——	–	Not used (Open).
32	X LP REC	O	Not used.
33	SBM	O	Super bit maping control output.
34	X SEL2605	O	Not used (Open).
35 to 38	AF 3 to AF 0	I	AF mode select. Fixed to "H".
39	MP	–	Not used (Connected to Ground).
40	X RST	I	System reset input. "L": Active

SW1	SW2	Position
L	L	EJECT
H	L	STOP
L	H	FWD
H	H	STOP-FWD

Pin No.	Pin Name	I/O	Function
41	VSS	–	Ground
42	XTAL	O	System clock output (Open).
43	EXTAL	I	System clock input (9.408MHz).
44	X DISP REQ	O	Communication request output to DISPLAY CONTROL (IC801). "L": Active
45	REC DI	O	Record current control output. "H": Record disable "H": Record enable
46	X END LED ON	O	End sensor ON control output. "L": Active
47	XROM CK	O	Clock output to EEPROM (IC999).
48	X DISP ACK	I	Communication acknowledge input from DISPLAY CONTROL (IC801). "L": Active
49	DISP DT I	I	Serial data input from DISPLAY CONTROL (IC801) and EEPROM.
50	DISP DT O	O	Serial data output to DISPLAY CONTROL (IC801) and EEPROM.
51	DISP CK	O	Serial clock output to DISPLAY CONTROL (IC801) and EEPROM.
52	X SBSY	I	SUB SYNC input from CXD2605Q (master).
53	SR DT I	I	Serial data input from CXD2605Q.
54	SR DT O	O	Serial data output to CXD2605Q.
55	X SR CK	O	Serial clock output to CXD2605Q (for sub code interface).
56	AVSS	–	Ground for A/D port.
57	AVREF	–	Reference voltage for A/D port (+5V).
58	AVDD	–	Power supply for A/D port (+5V).
59	T END	I	T side end sensor input.
60	S END	I	S side end sensor input.
61	TCC993	I	Fixed to "L".
62	——	I	Fixed to "H".
63	——	I	Not used (Connected to Ground).
64	MUT MON	I	Mute monitor input. "H": Active
65	M INT	I	Q code decode value input. "H": Between songs
66	ATF IN	I	ATF pilot signal input (Analog input).
67	FG T	I	T side reel FG signal input.
68	FG S	I	S side reel FG signal input.
69	C FG	I	Capstan FG signal input.
70	D FG	I	Drum FG signal input.
71	D PG	I	Drum PG signal input.
72	D REF	I	Drum reference signal input.
73	ATF S2	I	DPG auto adjustment FRC signal input.
74	——	I	Not used (Connected to Ground)
75	MAIN CHECK	O	Main routine passed check output.
76	X CAS TEST	I	Test pin. "L": Test mode with no cassette compartment.
77	MST CK	I	Master clock input (9.408MHz).
78	PB DT	I	ATF SYNC PB data input.
79	SW P	O	Switching pulse output.
80	AGC PWM	O	PWM signal output for AGC.

Pin No.	Pin Name	I/O	Function
81	PWM R	O	PWM signal output for reel motor.
82	TEN PWM	O	PWM signal output for tension regulater plunger.
83	D PWM	O	PWM signal output for drum motor drive.
84	C PWM	O	PWM signal output for capstan motor.
85	SY MN	I	Not used.
86	X TEST	I	Test pin. "L": Test mode
87	POW DN	I	Not used (Connected to +5V).
88	VSS	–	Ground
89	VDD	–	Power supply (+5V).
90	VPP	–	Connected to +5V.
91	ATF S2	O	ATF sampling pulse #2 output.
92	AREA	O	Not used.
93	X A/D INIT	O	A/D converter reset output.
94	X D/A INIT	O	D/A digital filter reset output. "L": Reset
95	X L MUTE	O	Line mute output. "L": Active
96	AD PD	–	Not used.
97	X RY MUTE	O	Relay mute signal output. "L": Active
98	MUTE 2605	O	Mute signal to CXD2605Q. "H": Active
99	——	–	Not used.
100	REEL CCW	O	Reel motor CCW output. "L": RVS direction

• DISPLAY BOARD IC801 CXP82316-061Q (DISPLAY CONTROL)

Pin No.	Pin Name	I/O	Function
1	H	I	Not used (Connected to +5V).
2	RMC	I	Remote control signal input.
3	TEST	I	Test pin. "L": Test mode
4	A1 METER	O	DIGITAL METER (IC802) 4-bit address bus.
5	A2 METER	O	
6	M MUT	I	Level meter mute signal input.
7	ACK	O	Acknowledge signal output to MAIN, MECHA CONTROL (IC310).
8	SC	I	Serial clock input from MAIN, MECHA CONTROL (IC310).
9	SI	I	Serial data input from MAIN, MECHA CONTROL (IC310).
10	SO	O	Serial data output to MAIN, MECHA CONTROL (IC310).
11	CS METER	O	CS signal output to DIGITAL METER (IC802).
12	RD METER	O	RD signal output to DIGITAL METER (IC802).
13	WR METER	O	WR signal output to DIGITAL METER (IC802).
14 to 21	——	O	Not used (Open).
22 to 29	AD0 to AD7	I	Key switch AD0 to AD7 series input.
30	XRST	I	System reset input. "L": Active
31	EXTAL	I	System clock input. (4.19MHz).
32	XTAL	O	System clock output (4.19MHz).
33	VSS	–	Ground
34 to 57	S0 to S23	O	Fluorescent indicator display segment drive output.
58 to 70	T12 to T0	O	Fluorescent indicator display grid drive output.
71	VFDP	I	–30V power supply for driving fluorescent indicator display.
72	VDD	–	Power supply (+5V).
73	NC	–	Not used (Connected to +5V)
74 to 77	D0 to D3 METER	I/O	DIGITAL METER (IC802) 4-bit data bus.
78	H	I	Not used (Connected to +5V)
79	REQ	I	Communication request signal input from MAIN, MECHA CONTROL (IC310).
80	MODE	I	Not used (Connected to Ground).

• DISPLAY BOARD IC802 MSM6338RS (DIGITAL METER)

Pin No.	Pin Name	I/O	Function
1	DATA	I	fs serial data input (2's complement)
2	BCK	I	fs serial data fetch clock (Bit clock)
3	LRCK	I	fs input Lch/Rch discrimination signal. "H": Rch, "L": Lch.
4	XRST	I	Reset input. "L": Reset.
5	WR	I	Data write request input (Data write at rising edge)
6	RD	I	Data read request input ("L": Read enable)
7	CS	I	Chip select input ("L": Select)
8	Vss	–	Ground
9	D0	I/O/Z	4-bit data bus (Tristate)
10	NC	–	Not used (Open).
11	D1	I/O/Z	4-bit data bus (Tristate)
12	D2	I/O/Z	
13	D3	I/O/Z	
14	A0	I	Address input. Selects internal register.
15	A1	I	
16	VDD	–	Power supply (+5V).

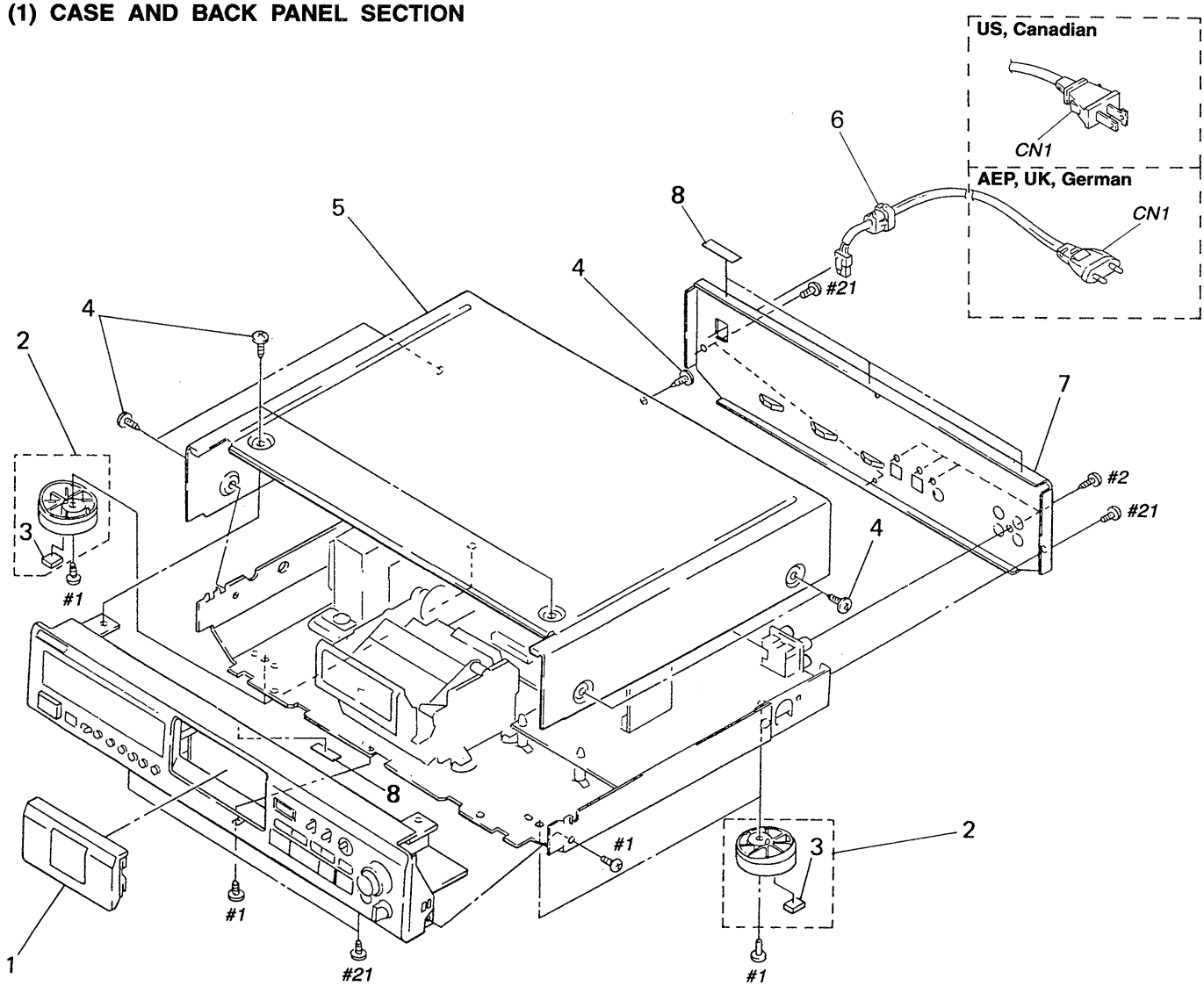
SECTION 5
EXPLODED VIEWS

NOTE:

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearrance Parts Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of the electrical parts list.

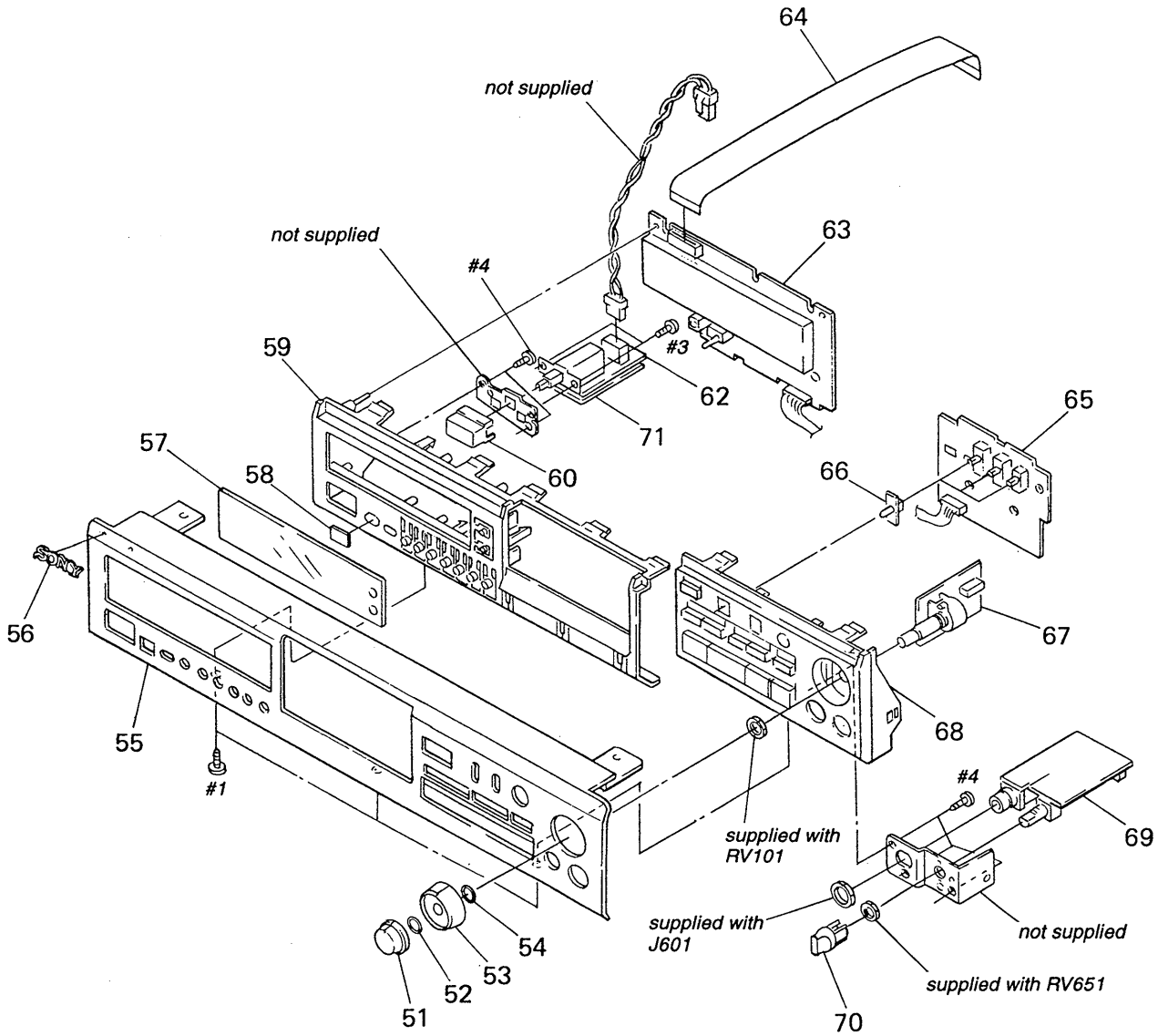
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.
Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité. Ne les remplacer que par une pièce portant le neméro spécifié.

(1) CASE AND BACK PANEL SECTION



Ref. No.	Part No.	Description	Remark
1	X-3372-695-1	PANEL ASSY	
2	X-4947-389-1	FOOT ASSY (F50150S) (AEP, UK, German)	
2	X-4947-390-1	FOOT ASSY (F50150S) (US, Canadian)	
3	4-983-762-02	CUSHION	
4	3-363-099-01	SCREW (CASE 3 TP2)	
* 5	3-938-317-01	CASE	
* 6	3-703-244-00	BUSHING (2104), CORD	
* 7	3-938-321-01	PANEL, BACK (AEP, UK, German)	
* 7	3-938-321-21	PANEL, BACK (US, Canadian)	
8	3-831-441-XX	CUSHION, SPEAKER	
⚠CN1	1-575-651-21	CORD, POWER (AEP, UK, German)	
⚠CN1	1-590-836-11	CORD, POWER (US, Canadian)	

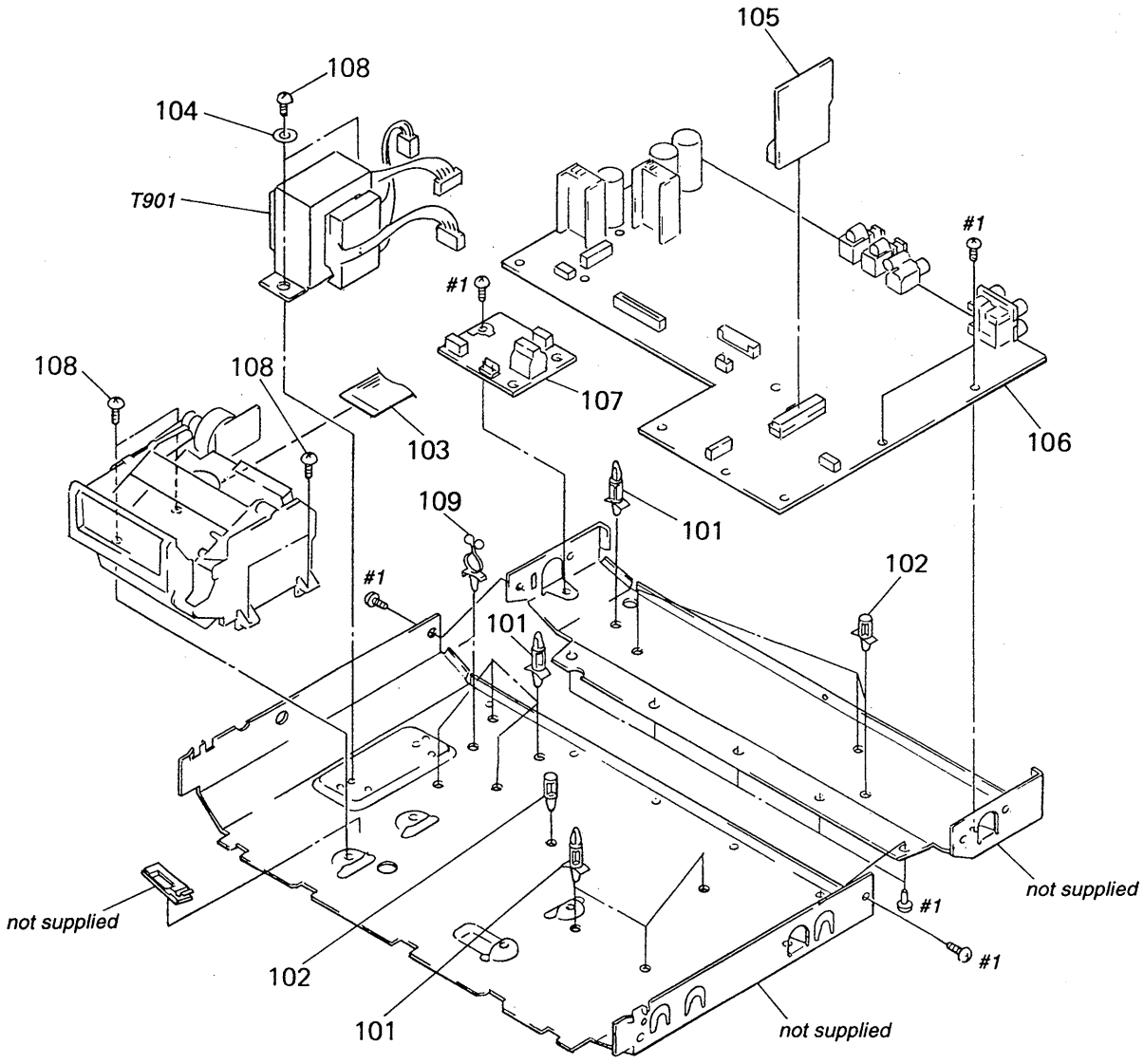
(2) FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
51	3-382-635-01	KNOB (REC-R)	
52	3-356-957-01	SPRING	
53	3-382-634-01	KNOB (REC-L)	
54	3-382-627-01	SPRING, RING	
55	3-938-326-01	PANEL, FRONT	
56	4-979-587-01	EMBLEM (NO.5), SONY	
57	3-938-327-01	WINDOW (FL)	
58	3-939-375-01	WINDOW (RAY CATCHER)	
59	3-938-324-01	ESCUTCHEON (L)	
60	4-977-589-01	BUTTON (POWER)	

Ref. No.	Part No.	Description	Remark
* 62	1-662-001-11	AC SW BOARD	
* 63	A-2007-604-A	DISPLAY BOARD, COMPLETE	
64	1-775-464-11	WIRE (FLAT TYPE) (17 CORE)	
* 65	A-2007-605-A	CONTROL SW BOARD, COMPLETE	
66	3-917-216-11	KNOB (TIMER)	
* 67	1-662-000-11	REC VOL BOARD	
68	X-3372-683-1	ESCUTCHEON (R/B) ASSY	
* 69	1-661-998-11	HEADPHONE BOARD	
70	4-950-189-01	KNOB (A) (VOL)	
* 71	1-662-002-11	SW COVER BOARD	

(3) CHASSIS SECTION

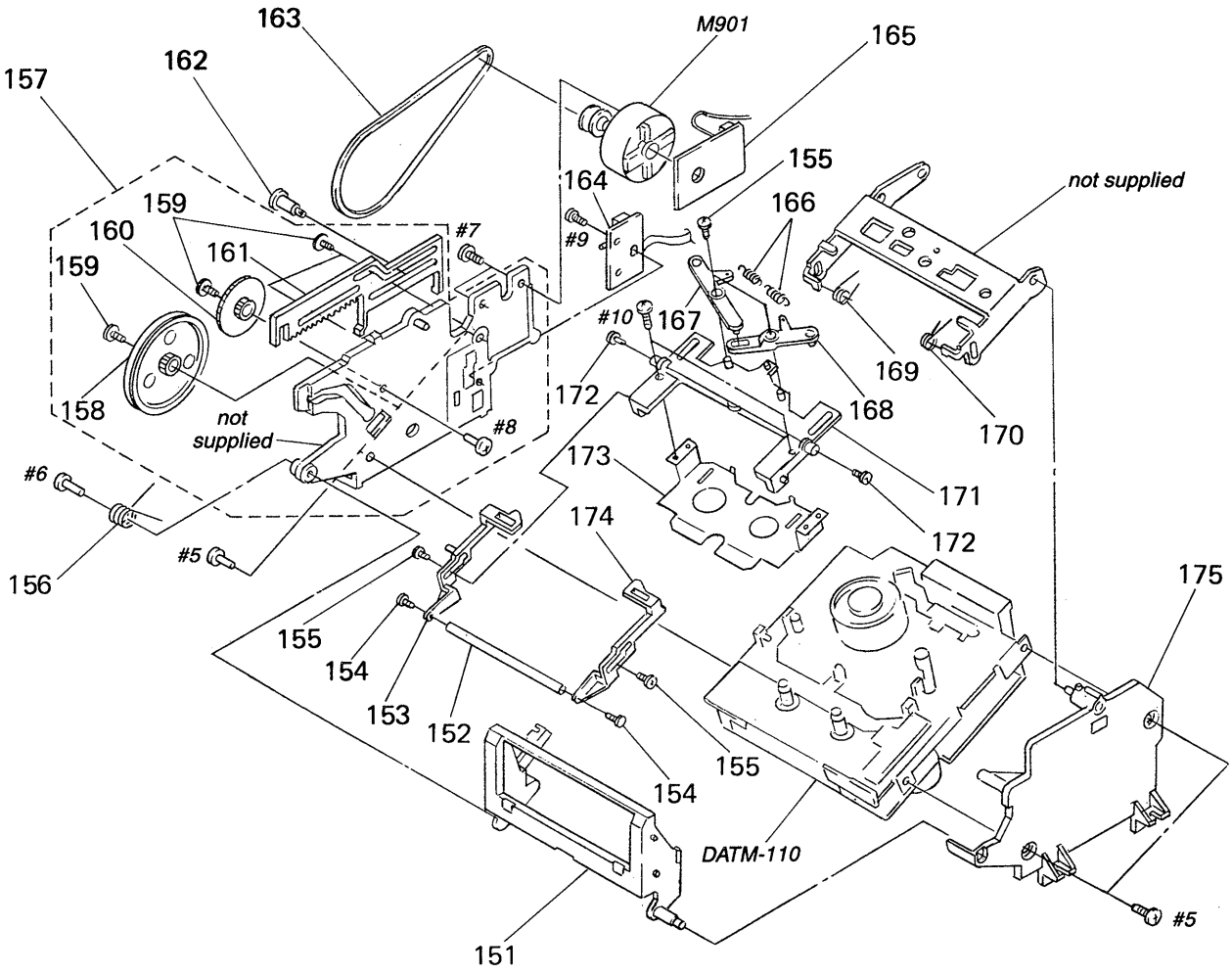


The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
* 101	4-954-051-51	HOLDER, PC BOARD	
* 102	3-670-570-31	SPACER, SUPPORT	
103	1-775-389-11	WIRE (FLAT TYPE) (31 CORE)	
104	3-701-418-00	WASHER, SPECIAL	
* 105	1-656-335-11	SBM DF BOARD	
* 106	A-2007-610-A	MAIN BOARD, COMPLETE (AEP, UK, German)	

Ref. No.	Part No.	Description	Remark
* 106	A-2007-612-A	MAIN BOARD, COMPLETE (US, Canadian)	
* 107	1-661-999-11	PRIMARY BOARD	
108	4-886-821-11	SCREW, S TIGHT, + PTTWH 3X6	
109	2-132-434-01	CLIP, WIRE	
⚠T901	1-427-889-11	TRANSFORMER, POWER (US, Canadian)	
⚠T901	1-427-890-11	TRANSFORMER, POWER (AEP, UK, German)	

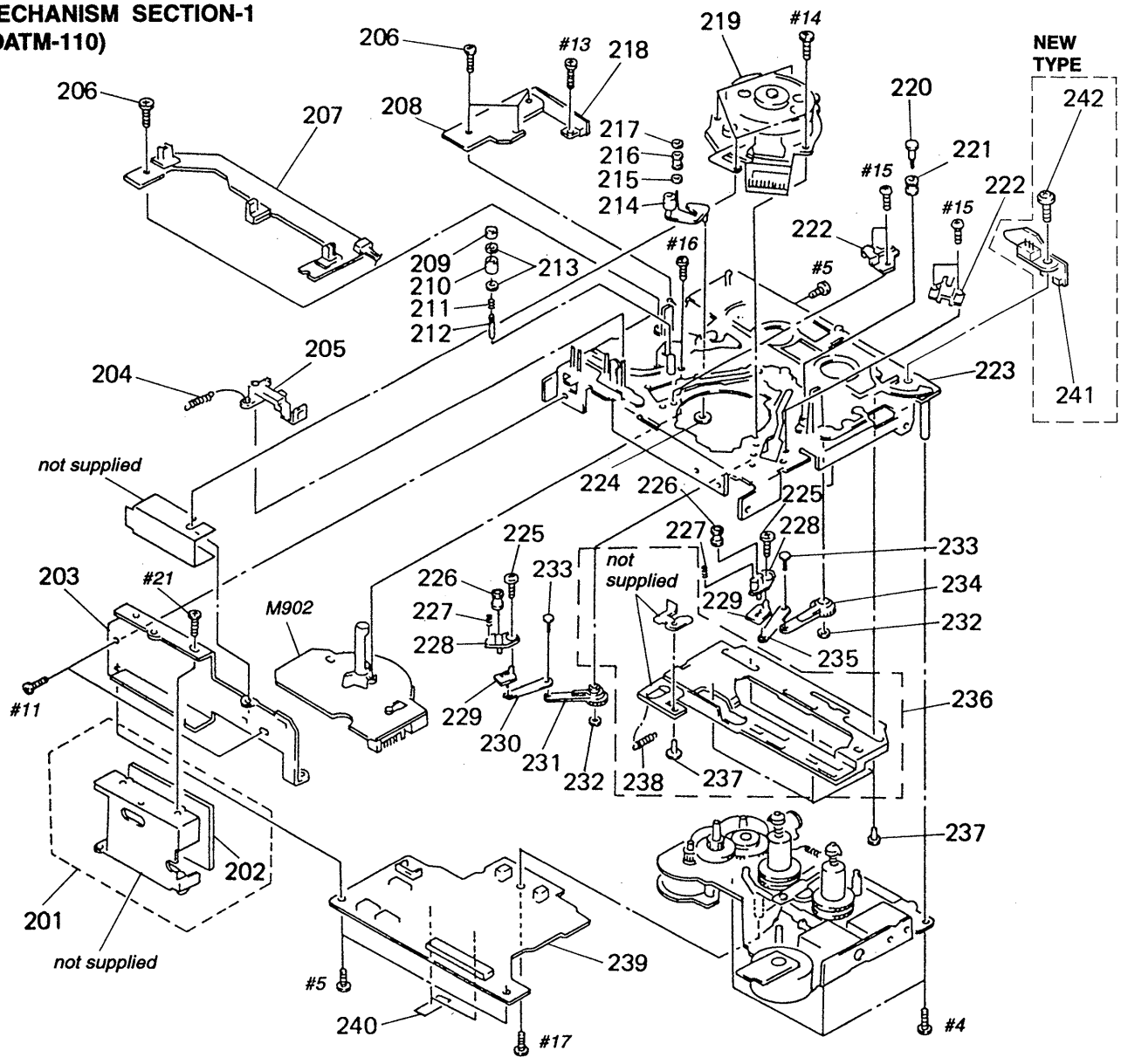
(4) CASSETTE COMPARTMENT SECTION



Ref. No.	Part No.	Description	Remark
151	3-382-648-01	HOLDER (WINDOW)	
* 152	3-373-217-01	SHAFT (JOINT)	
153	3-373-223-01	SLIDER (L)	
154	3-345-648-61	SCREW (M1.4), TOOTHED LOCK	
155	3-318-201-11	SCREW (B) (1.4X3), TAPPING	
156	3-373-212-01	SPRING (CASSETTE)	
157	A-2004-153-E	CHASSIS (L) ASSY	
158	3-373-214-01	PULLEY	
159	2-623-756-01	SCREW, (B1.7X3), TAPPING	
160	3-373-213-01	GEAR, DRIVING	
161	3-373-221-01	SLIDER (RACK)	
162	4-931-471-01	SCREW (STEP)	
163	4-931-470-01	BELT (DRIVING)	

Ref. No.	Part No.	Description	Remark
* 164	1-655-916-11	CASSETTE COMPARTMENT SW BOARD	
* 165	1-655-913-11	CASSETTE COMPARTMENT MOTOR BOARD	
166	3-632-859-00	SPRING, BRAKE LEVER RETURN	
167	3-373-219-01	LEVER (L)	
168	3-373-218-01	LEVER (R)	
169	3-373-216-01	SPRING (L), TORSION	
170	3-373-215-01	SPRING (R), TORSION	
171	3-373-237-03	HOLDER (UPPER), CASSETTE	
172	3-318-203-61	SCREW (B1.7X4), TAPPING	
173	3-373-224-01	HOLDER (LOWER)	
174	3-373-222-01	SLIDER (R)	
* 175	3-373-235-01	CHASSIS (R)	
M901	X-3370-655-1	MOTOR ASSY (CASSETTE COMPARTMENT)	

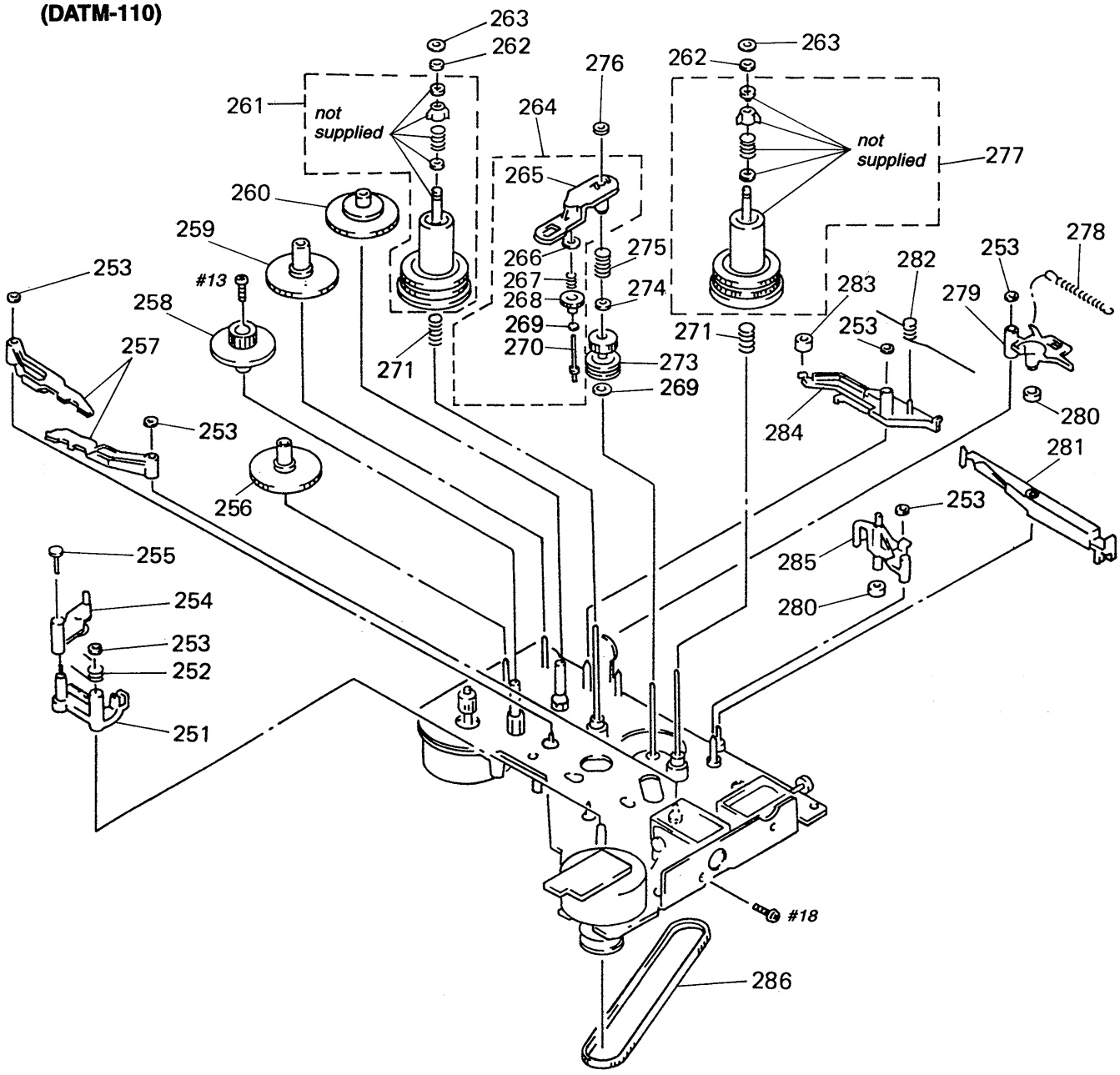
(5) MECHANISM SECTION-1 (DATM-110)



Ref. No.	Part No.	Description	Remark
* 201	A-2001-587-A	RF COMPLETE ASSY	
* 202	A-2006-455-A	RF AMP BOARD, COMPLETE	
* 203	3-368-391-01	BRACKET (RF)	
204	3-927-041-01	SPRING (16G), TENSION	
205	X-3370-965-1	LEVER (CLEANER) ASSY	
206	3-372-761-01	SCREW (M1.7X4), TAPPING	
* 207	1-639-305-11	TOP END SENSOR BOARD	
* 208	1-639-306-11	CAM SLIDER BOARD	
209	3-337-605-01	NUT, ADJUSTMENT	
210	3-337-676-01	GUIDE, FIXED	
211	3-389-294-01	SPRING (T2 300G), COMPRESSION	
212	3-337-674-01	SHAFT, GUIDE	
213	3-337-677-01	FLANGE	
214	X-3363-025-1	PINCH LEVER ASSY	
215	3-387-983-01	POLY-SLIDER (T3 GUIDE)	
216	3-384-243-01	GUIDE (T3), ROLLER	
217	3-315-384-31	WASHER, STOPPER	
* 218	1-639-301-11	RGN SW BOARD	
219	8-848-567-12	DRUM ASSY DOU-03A	
220	3-908-644-01	SHAFT (ROLLER GUIDE)	
221	3-368-399-01	GUIDE, ROLLER	
* 222	3-368-442-01	CATCHER	

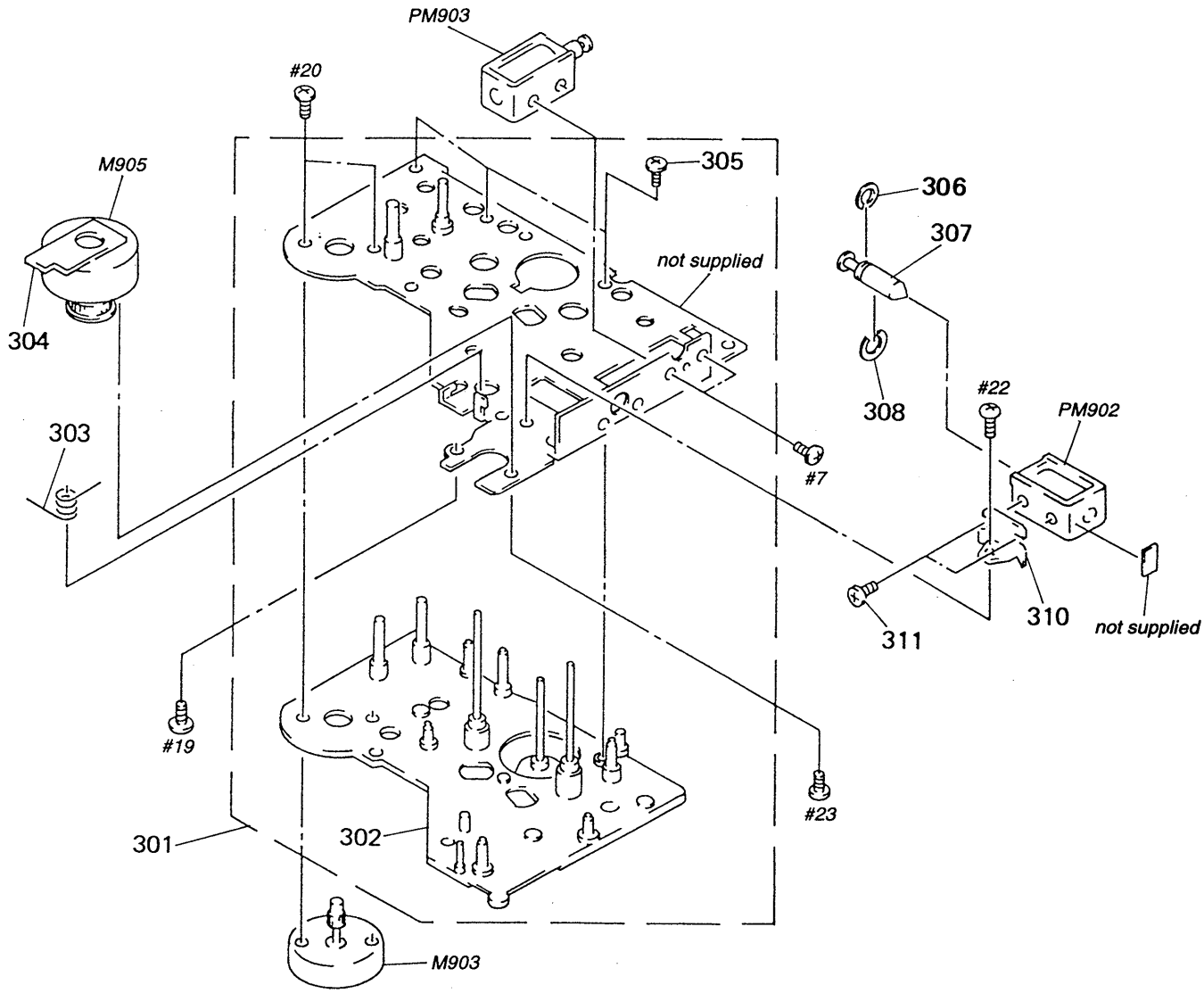
Ref. No.	Part No.	Description	Remark
* 223	X-3366-740-1	CHASSIS ASSY, MECHANICAL	
224	3-701-436-11	WASHER, STOPPER	
225	3-368-413-01	SCREW (1.4), +P TAPPING (B)	
226	X-3371-518-1	ROLLER GUIDE ASSY	
227	3-368-436-01	SPRING (#1 GUIDE), COMPRESSION	
* 228	3-368-390-01	BASE (#1 GUIDE)	
229	3-368-409-01	JOINT (#1 GUIDE)	
230	3-368-426-01	LEVER (LOAD-S)	
231	3-368-443-01	GEAR (LOAD-S)	
232	3-368-398-01	BUSHING	
233	3-368-415-01	SHAFT (LOAD LEVER JOINT)	
234	3-368-444-01	GEAR (LOAD-T)	
235	3-368-427-01	LEVER (LOAD-T)	
* 236	A-2003-708-A	SLIDER ASSY, CAM	
237	3-368-414-01	SHAFT (CAM SLIDER GUIDE)	
238	3-368-439-01	SPRING (PINCH PRESS), TENSION	
* 239	A-2007-419-A	DRUM DRIVE BOARD, COMPLETE	
240	3-831-441-XX	CUSHION, SPEAKER	
* 241	1-664-518-11	DETECTION BOARD (NEW TYPE)	
242	3-321-041-01	SCREW (M1.7X3.5), TAPPING (NEW TYPE)	
M902	8-835-361-01	MOTOR, DC U-17B (CAPSTAN)	

(6) MECHANISM SECTION -2 (DATM-110)



Ref. No.	Part No.	Description	Remark
251	X-3369-126-1	LEVER (BT SOLENOID)	
252	3-383-478-01	SPRING (B.T LEVER RETURN)	
253	3-368-398-01	BUSHING	
* 254	3-368-454-01	LEVER (BT SELECTION)	
255	3-368-415-01	SHAFT (LOAD LEVER JOINT)	
256	3-368-402-01	GEAR (CAM DRIVE A, B)	
257	X-3363-024-1	LEVER (BT) ASSY	
258	3-368-403-01	GEAR (CAM DRIVE D)	
259	3-373-039-01	GEAR (CAM DRIVE B)	
260	3-368-421-01	GEAR (CAM DRIVE C)	
261	A-2004-476-A	TABLE (T) ASSY, REEL	
262	3-578-224-00	WASHER	
263	3-315-384-01	WASHER, STOPPER	
264	X-3364-581-3	LEVER (F/R) ASSY	
265	3-368-450-01	LEVER (F/R)	
266	3-368-422-01	POLY-SLIDER(DIA. 5.5-DIA. 1.5)	
267	3-923-260-01	SPRING, COMPRESSION	
268	3-368-406-01	GEAR (GOOSENECK)	
269	3-701-436-01	WASHER, 1.6	
270	3-375-210-01	SHAFT (GOOSENECK GEAR)	
271	3-905-586-02	SPRING (FF/REW), COMPRESSION	
273	X-3363-022-1	GEAR (REEL DRIVE) ASSY	
274	3-368-422-11	POLY-SLIDER(DIA. 5.5-DIA. 1.5)	
275	3-923-261-01	SPRING (FR LEVER), COMPRESSION	
276	3-315-384-31	WASHER, STOPPER	
277	A-2004-475-A	TABLE (S) ASSY, REEL	
278	3-368-438-01	SPRING (BREAK), TENSION	
* 279	3-368-446-01	LEVER (BRAKE T)	
280	3-377-332-01	TUBE (BREAK2)	
* 281	3-368-453-01	LEVER (BRAKE SOLENOID)	
282	3-368-430-01	SPRING (GEAR LOCK)	
283	3-368-418-01	TUBE (BREAK)	
* 284	3-368-455-01	LEVER (GEAR LOCK)	
* 285	3-368-447-01	LEVER (BRAKE S)	
286	3-368-417-01	BELT (170TN10-1.0T), TIMING	

(7) MECHANISM SECTION -3 (DATM-110)



Ref. No.	Part No.	Description	Remark
* 301	A-2004-478-A	CHASSIS (REEL) ASSY	
* 302	X-3366-312-1	CHASSIS ASSY, REEL	
303	3-368-431-01	SPRING (B.T SOLENOID)	
* 304	1-639-304-14	REEL MOTOR BOARD	
305	2-623-756-01	SCREW, (B1.7X3), TAPPING	
306	3-905-867-01	SPRING (STOPPER)	
307	3-380-525-01	ARBOR (BT ADJUSTMENT), MAVABLE	
308	3-919-599-01	SPACER (P)	
* 310	3-368-416-01	BRACKET (B.T SOLENOID)	
311	3-368-423-01	SCREW (M2.6), STEP	
M903	X-3363-109-1	MOTOR (CAM) ASSY	
M905	X-3363-110-2	MOTOR (REEL) ASSY	
PM902	1-454-536-11	SOLENOID, PLUNGER	
PM903	1-454-732-11	SOLENOID, PLUNGER	

SECTION 6
ELECTRICAL PARTS LIST

AC SW | **CASSETTE COMPARTMENT MOTOR** | **CASSETTE COMPARTMENT SW** | **DETECTION** | **DISPLAY**

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F:nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u:μ, for example:
  uA..: μA.. uPA..: μPA..
  uPB..: μPB.. uPC..: μPC.. uPD..: μPD..
- CAPACITORS
  uF: μF
- COILS
  uH: μH

When indicating parts by reference number, please include the board.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description			Remark
*	1-662-001-11	AC SW BOARD			
		**********			
		< CONNECTOR >			
CN004	1-580-230-51	PIN, CONNECTOR (PC BOARD) 2P			
		< SWITCH >			
⚠S001	1-572-267-51	SWITCH, PUSH (AC POWER) (1 KEY) (POWER)			
*	1-639-306-11	CAM SLIDER BOARD			
		< CHIP CONDUCTOR >			
JW04	1-216-296-91	CONDUCTOR, CHIP	(3216)		
		< SWITCH >			
SW1	1-570-953-11	SWITCH, PUSH (1 KEY) (STOP DET)			
SW2	1-570-953-11	SWITCH, PUSH (1 KEY) (FWD DET)			
**********					
*	1-655-913-11	CASSETTE COMPARTMENT MOTOR BOARD			
		**********			
		< CAPACITOR >			
C1	1-161-772-11	CERAMIC	0.1uF	10% 25V	
		< CONNECTOR >			
* CN1	1-564-498-11	PIN, CONNECTOR 5P			
* CN2	1-564-337-00	PIN, CONNECTOR 3P			
**********					
*	1-655-916-11	CASSETTE COMPARTMENT SW BOARD			
		**********			
		< SWITCH >			
S1	1-571-958-11	SWITCH, PUSH (1 KEY) (CASSETTE TABLE IN)			
S2	1-571-958-11	SWITCH, PUSH (1 KEY) (CASSETTE TABLE OUT)			
**********					

Ref. No.	Part No.	Description			Remark
*	1-664-518-11	DETECTION BOARD (NEW TYPE)			
		**********			
		< CONNECTOR >			
* CN21	1-564-336-61	PIN, CONNECTOR 2P			
		< SWITCH >			
S02	1-572-458-11	SWITCH, PUSH (THIN TAPE DET)			
**********					
*	A-2007-604-A	DISPLAY BOARD, COMPLETE			
		**********			
*	4-932-810-11	CUSHION (FL)			
*	4-947-170-01	HOLDER			
		< CAPACITOR >			
C881	1-164-159-11	CERAMIC	0.1uF	50V	
C882	1-164-159-11	CERAMIC	0.1uF	50V	
C883	1-164-159-11	CERAMIC	0.1uF	50V	
C884	1-126-177-11	ELECT	100uF	20% 10V	
C885	1-164-159-11	CERAMIC	0.1uF	50V	
C886	1-164-096-11	CERAMIC	0.01uF	50V	
C891	1-164-159-11	CERAMIC	0.1uF	50V	
		< CONNECTOR >			
CN801	1-568-860-11	SOCKET, CONNECTOR 17P			
		< COMPOSITION CIRCUIT BLOCK >			
CP801	1-233-566-11	COMPOSITION CIRCUIT BLOCK			
CP802	1-233-566-11	COMPOSITION CIRCUIT BLOCK			
CP803	1-233-566-11	COMPOSITION CIRCUIT BLOCK			
CP804	1-233-566-11	COMPOSITION CIRCUIT BLOCK			
		< FILTER >			
FL801	1-517-382-11	INDICATOR TUBE, FLUORESCENT			

Ref.No.	Part No.	Description	Remark
		< IC >	
IC801	8-752-869-39	IC CXP82316-061Q	
IC802	8-759-995-09	IC MSM6338RS	
IC891	8-759-373-49	IC NJL54H400	
		< TRANSISTOR >	
Q801	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q802	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q803	8-729-620-05	TRANSISTOR 2SC2603-EF	
		< RESISTOR >	
R801	1-249-427-11	CARBON 6.8K 5%	1/4W
R807	1-249-429-11	CARBON 10K 5%	1/4W
R811	1-249-427-11	CARBON 6.8K 5%	1/4W
R818	1-249-435-11	CARBON 33K 5%	1/4W
R821	1-249-427-11	CARBON 6.8K 5%	1/4W
R822	1-249-415-11	CARBON 680 5%	1/4W
R823	1-249-417-11	CARBON 1K 5%	1/4W
R824	1-249-419-11	CARBON 1.5K 5%	1/4W
R825	1-247-843-11	CARBON 3.3K 5%	1/4W
R826	1-249-425-11	CARBON 4.7K 5%	1/4W
R831	1-249-427-11	CARBON 6.8K 5%	1/4W
R841	1-249-427-11	CARBON 6.8K 5%	1/4W
R851	1-249-427-11	CARBON 6.8K 5%	1/4W
R861	1-249-427-11	CARBON 6.8K 5%	1/4W
R871	1-249-427-11	CARBON 6.8K 5%	1/4W
R881	1-249-417-11	CARBON 1K 5%	1/4W
R882	1-249-437-11	CARBON 47K 5%	1/4W
R883	1-249-437-11	CARBON 47K 5%	1/4W
R884	1-249-437-11	CARBON 47K 5%	1/4W
R885	1-249-437-11	CARBON 47K 5%	1/4W
R886	1-249-437-11	CARBON 47K 5%	1/4W
R887	1-249-417-11	CARBON 1K 5%	1/4W
R888	1-249-437-11	CARBON 47K 5%	1/4W
R889	1-249-437-11	CARBON 47K 5%	1/4W
R890	1-249-429-11	CARBON 10K 5%	1/4W
R891	1-249-429-11	CARBON 10K 5%	1/4W
		< SWITCH >	
S806	1-554-937-11	SWITCH, KEY BOARD (MODE)	
S807	1-554-937-11	SWITCH, KEY BOARD (RESET)	
S817	1-762-609-11	SWITCH, SLIDE (TIMER)	
S821	1-554-937-11	SWITCH, KEY BOARD (AUTO)	
S822	1-554-937-11	SWITCH, KEY BOARD (RENUMBER)	
S823	1-554-937-11	SWITCH, KEY BOARD (REHASAL) (START ID)	
S824	1-554-937-11	SWITCH, KEY BOARD (WRIT) (START ID)	
S825	1-554-937-11	SWITCH, KEY BOARD (ERASE) (START ID)	
S826	1-554-937-11	SWITCH, KEY BOARD (MAGIN RESET)	

Ref.No.	Part No.	Description	Remark
		< VIBRATOR >	
X801	1-577-359-21	VIBRATOR, CERAMIC (4.19MHZ)	
**********			
*	A-2007-419-A	DRUM DRIVE BOARD, COMPLETE	
		**********	
*	4-870-539-00	PLATE, GROUND	
		< CAPACITOR >	
C01	1-126-176-11	ELECT 220uF 20%	10V
C02	1-126-157-11	ELECT 10uF 20%	16V
C03	1-124-257-00	ELECT 2.2uF 20%	50V
C04	1-164-161-11	CERAMIC CHIP 0.0022uF 10%	100V
C05	1-164-161-11	CERAMIC CHIP 0.0022uF 10%	100V
C08	1-163-001-11	CERAMIC CHIP 220PF 10%	50V
C21	1-163-001-11	CERAMIC CHIP 220PF 10%	50V
C31	1-163-001-11	CERAMIC CHIP 220PF 10%	50V
C32	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C33	1-163-038-91	CERAMIC CHIP 0.1uF	25V
C34	1-163-038-91	CERAMIC CHIP 0.1uF	25V
C35	1-163-038-91	CERAMIC CHIP 0.1uF	25V
		< CONNECTOR >	
CN01	1-691-459-21	PIN, CONNECTOR (PC BOARD) 3P	
* CN02	1-564-704-11	PIN, CONNECTOR (SMALL TYPE) 2P	
* CN03	1-564-338-00	PIN, CONNECTOR 4P	
* CN04	1-564-336-00	PIN, CONNECTOR 2P	
* CN06	1-564-339-00	PIN, CONNECTOR 5P	
CN07	1-564-721-11	PIN, CONNECTOR (SMALL TYPE) 5P	
* CN08	1-568-873-11	SOCKET, CONNECTOR 31P	
* CN09	1-564-706-11	PIN, CONNECTOR (SMALL TYPE) 4P	
* CN10	1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P	
* CN18	1-564-495-11	PIN, CONNECTOR 2P (NEW TYPE)	
		< IC >	
IC01	8-752-060-73	IC CX20115A-T4	
IC02	8-759-502-80	IC LM358M	
IC03	8-759-502-80	IC LM358M	
		< CHIP CONDUCTOR >	
JW06	1-216-296-91	CONDUCTOR, CHIP (3216)	(FORMER TYPE)
JW07	1-216-296-91	CONDUCTOR, CHIP (3216)	
JW08	1-216-296-91	CONDUCTOR, CHIP (3216)	
JW09	1-216-296-91	CONDUCTOR, CHIP (3216)	
JW10	1-216-296-91	CONDUCTOR, CHIP (3216)	
JW11	1-216-296-91	CONDUCTOR, CHIP (3216)	
JW13	1-216-296-91	CONDUCTOR, CHIP (3216)	

DRUM DRIVE

Ref. No.	Part No.	Description			Remark
JW14	1-216-296-91	CONDUCTOR, CHIP	(3216)		
JW15	1-216-296-91	CONDUCTOR, CHIP	(3216)		
JW17	1-216-296-91	CONDUCTOR, CHIP	(3216)		
JW19	1-216-296-91	CONDUCTOR, CHIP	(3216)		
JW21	1-216-296-91	CONDUCTOR, CHIP	(3216)		
JW22	1-216-296-91	CONDUCTOR, CHIP	(3216)		
JW23	1-216-296-91	CONDUCTOR, CHIP	(3216)		
JW24	1-216-296-91	CONDUCTOR, CHIP	(3216)		
JW25	1-216-296-91	CONDUCTOR, CHIP	(3216)		
JW26	1-216-296-91	CONDUCTOR, CHIP	(3216)		
JW27	1-216-296-91	CONDUCTOR, CHIP	(3216)		
JW28	1-216-296-91	CONDUCTOR, CHIP	(3216)		
JW29	1-216-296-91	CONDUCTOR, CHIP	(3216)		
JW31	1-216-296-91	CONDUCTOR, CHIP	(3216)		
JW32	1-216-296-91	CONDUCTOR, CHIP	(3216)		
JW33	1-216-296-91	CONDUCTOR, CHIP	(3216)		
JW34	1-216-296-91	CONDUCTOR, CHIP	(3216)		
JW35	1-216-296-91	CONDUCTOR, CHIP	(3216)		
JW36	1-216-296-91	CONDUCTOR, CHIP	(3216)		
JW37	1-216-296-91	CONDUCTOR, CHIP	(3216)		
		< PHOTO INTERRUPTER >			
PH01	8-719-939-23	PHOTO INTERRUPTER GP-2S09-C			
PH02	8-719-939-23	PHOTO INTERRUPTER GP-2S09-C			
		< TRANSISTOR >			
Q01	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q02	8-729-101-07	TRANSISTOR	2SB798-DL		
		< RESISTOR >			
R01	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R02	1-216-073-00	METAL CHIP	10K	5%	1/10W
R03	1-216-029-00	METAL CHIP	150	5%	1/10W
R04	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R05	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R06	1-216-085-00	METAL CHIP	33K	5%	1/10W
R07	1-216-025-91	METAL GLAZE	100	5%	1/10W
R08	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R09	1-216-073-00	METAL CHIP	10K	5%	1/10W
R10	1-216-073-00	METAL CHIP	10K	5%	1/10W
R11	1-216-073-00	METAL CHIP	10K	5%	1/10W
R12	1-216-073-00	METAL CHIP	10K	5%	1/10W
R13	1-216-073-00	METAL CHIP	10K	5%	1/10W
R14	1-216-037-00	METAL CHIP	330	5%	1/10W
R21	1-216-073-00	METAL CHIP	10K	5%	1/10W
R22	1-216-081-00	METAL CHIP	22K	5%	1/10W
R23	1-216-077-00	METAL CHIP	15K	5%	1/10W
R24	1-216-069-00	METAL CHIP	6.8K	5%	1/10W

HEADPHONE

Ref. No.	Part No.	Description			Remark
R25	1-216-105-91	METAL GLAZE	220K	5%	1/10W
R26	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R31	1-216-073-00	METAL CHIP	10K	5%	1/10W
R32	1-216-081-00	METAL CHIP	22K	5%	1/10W
R35	1-216-105-91	METAL GLAZE	220K	5%	1/10W
R36	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
*	1-661-998-11	HEADPHONE BOARD			
		< CAPACITOR >			
C681	1-124-120-11	ELECT	220uF	20%	25V
C682	1-124-120-11	ELECT	220uF	20%	25V
		< CONNECTOR >			
CN652	1-564-510-11	PLUG (MICRO CONNECTOR) 6P			
		< IC >			
IC681	8-759-981-96	IC RC4560D			
		< JACK >			
J601	1-770-904-11	JACK (LARGE TYPE) (PHONES)			
		< COIL >			
L399	1-236-163-11	ENCAPSULATED COMPONENT			
L400	1-236-163-11	ENCAPSULATED COMPONENT			
		< RESISTOR >			
R231	1-249-435-11	CARBON	33K	5%	1/4W
R232	1-249-425-11	CARBON	4.7K	5%	1/4W
R233	1-249-431-11	CARBON	15K	5%	1/4W
R234	1-247-807-31	CARBON	100	5%	1/4W
R281	1-249-435-11	CARBON	33K	5%	1/4W
R282	1-249-425-11	CARBON	4.7K	5%	1/4W
R283	1-249-431-11	CARBON	15K	5%	1/4W
R284	1-247-807-31	CARBON	100	5%	1/4W
⚠R691	1-212-857-00	FUSIBLE	10	5%	1/4W F
⚠R692	1-212-857-00	FUSIBLE	10	5%	1/4W F
		< VARIABLE RESISTOR >			
RV651	1-223-620-11	RES, VAR, CARBON 20K/20K(PHONE LEVEL)			

MAIN

*	A-2007-610-A	MAIN BOARD, COMPLETE (AEP, UK, German)
*	A-2007-612-A	MAIN BOARD, COMPLETE (US, Canadian)
*	1-533-213-31	HOLDER, FUSE

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description			Remark
	1-537-770-21	TERMINAL BOARD, GROUND			
*	4-363-146-71	HEAT SINK, V. OUT			
	7-682-548-09	SCREW +B 3X8			
		< CAPACITOR >			
C101	1-104-664-11	ELECT	47uF	20%	25V
C102	1-162-286-31	CERAMIC	220PF	10%	50V
C103	1-104-664-11	ELECT	47uF	20%	25V
C107	1-130-481-00	MYLAR	0.0068uF	5%	50V
C151	1-104-664-11	ELECT	47uF	20%	25V
C152	1-162-286-31	CERAMIC	220PF	10%	50V
C153	1-104-664-11	ELECT	47uF	20%	25V
C157	1-130-481-00	MYLAR	0.0068uF	5%	50V
C201	1-130-471-00	MYLAR	0.001uF	5%	50V
C202	1-110-341-11	MYLAR	330PF	5%	50V
C203	1-110-341-11	MYLAR	330PF	5%	50V
C204	1-130-471-00	MYLAR	0.001uF	5%	50V
C205	1-130-479-00	MYLAR	0.0047uF	5%	50V
C206	1-124-443-00	ELECT	100uF	20%	10V
C207	1-162-302-11	CERAMIC	0.0022uF	30%	16V
C251	1-130-471-00	MYLAR	0.001uF	5%	50V
C252	1-110-341-11	MYLAR	330PF	5%	50V
C253	1-110-341-11	MYLAR	330PF	5%	50V
C254	1-130-471-00	MYLAR	0.001uF	5%	50V
C255	1-130-479-00	MYLAR	0.0047uF	5%	50V
C256	1-124-443-00	ELECT	100uF	20%	10V
C257	1-162-302-11	CERAMIC	0.0022uF	30%	16V
C302	1-162-197-31	CERAMIC	6.8PF	10%	50V
C304	1-124-903-11	ELECT	1uF	20%	50V
C307	1-164-159-11	CERAMIC	0.1uF		50V
C308	1-162-294-31	CERAMIC	0.001uF	10%	50V
C309	1-124-443-00	ELECT	100uF	20%	10V
C310	1-164-159-11	CERAMIC	0.1uF		50V
C311	1-162-198-31	CERAMIC	8.2PF	10%	50V
C312	1-162-199-31	CERAMIC	10PF	5%	50V
C313	1-162-197-31	CERAMIC	6.8PF	10%	50V
C314	1-162-197-31	CERAMIC	6.8PF	10%	50V
C327	1-162-198-31	CERAMIC	8.2PF	10%	50V
C331	1-162-306-11	CERAMIC	0.01uF	20%	16V
C332	1-164-159-11	CERAMIC	0.1uF		50V
C333	1-162-211-31	CERAMIC	33PF	5%	50V
C334	1-124-907-11	ELECT	10uF	20%	50V
C335	1-162-306-11	CERAMIC	0.01uF	20%	16V
C336	1-164-159-11	CERAMIC	0.1uF		50V
C337	1-164-159-11	CERAMIC	0.1uF		50V
C338	1-164-159-11	CERAMIC	0.1uF		50V
C340	1-164-159-11	CERAMIC	0.1uF		50V
C341	1-164-159-11	CERAMIC	0.1uF		50V
C342	1-124-442-00	ELECT	330uF	20%	6.3V
C343	1-162-294-31	CERAMIC	0.001uF	10%	50V
C344	1-162-294-31	CERAMIC	0.001uF	10%	50V
C345	1-162-294-31	CERAMIC	0.001uF	10%	50V
C351	1-162-306-11	CERAMIC	0.01uF	20%	16V
C352	1-162-306-11	CERAMIC	0.01uF	20%	16V
C353	1-162-294-31	CERAMIC	0.001uF	10%	50V
C354	1-164-159-11	CERAMIC	0.1uF		50V
C355	1-164-159-11	CERAMIC	0.1uF		50V
C356	1-164-159-11	CERAMIC	0.1uF		50V
C361	1-162-302-11	CERAMIC	0.0022uF	30%	16V
C362	1-162-302-11	CERAMIC	0.0022uF	30%	16V
C431	1-162-302-11	CERAMIC	0.0022uF	30%	16V
C432	1-162-305-11	CERAMIC	0.0068uF	30%	16V
C433	1-162-288-31	CERAMIC	330PF	10%	50V
C439	1-162-306-11	CERAMIC	0.01uF	20%	16V
C441	1-162-306-11	CERAMIC	0.01uF	20%	16V
C442	1-161-494-00	CERAMIC	0.022uF		25V
C443	1-162-301-11	CERAMIC	0.0015uF	20%	16V
C444	1-124-907-11	ELECT	10uF	20%	50V
C445	1-162-306-11	CERAMIC	0.01uF	20%	16V
C451	1-162-306-11	CERAMIC	0.01uF	20%	16V
C452	1-126-963-11	ELECT	4.7uF	20%	50V
C453	1-124-907-11	ELECT	10uF	20%	50V
C454	1-162-306-11	CERAMIC	0.01uF	20%	16V
C459	1-162-306-11	CERAMIC	0.01uF	20%	16V
C471	1-162-306-11	CERAMIC	0.01uF	20%	16V
C481	1-162-306-11	CERAMIC	0.01uF	20%	16V
C491	1-162-290-31	CERAMIC	470PF	10%	50V
C492	1-162-306-11	CERAMIC	0.01uF	20%	16V
C502	1-162-294-31	CERAMIC	0.001uF	10%	50V
C503	1-162-284-31	CERAMIC	150PF	10%	50V
C507	1-136-153-00	FILM	0.01uF	5%	50V
C509	1-164-159-11	CERAMIC	0.1uF		50V
C511	1-164-159-11	CERAMIC	0.1uF		50V
C515	1-136-169-00	FILM	0.22uF	5%	50V
C527	1-164-159-11	CERAMIC	0.1uF		50V
C601	1-136-165-00	FILM	0.1uF	5%	50V
C602	1-136-165-00	FILM	0.1uF	5%	50V
C621	1-124-907-11	ELECT	10uF	20%	50V
C622	1-124-907-11	ELECT	10uF	20%	50V
C623	1-136-165-00	FILM	0.1uF	5%	50V
C624	1-136-165-00	FILM	0.1uF	5%	50V
C625	1-136-165-00	FILM	0.1uF	5%	50V
C626	1-136-165-00	FILM	0.1uF	5%	50V
C627	1-126-941-11	ELECT	470uF	20%	6.3V
C628	1-126-941-11	ELECT	470uF	20%	6.3V
C630	1-124-907-11	ELECT	10uF	20%	50V
C651	1-136-165-00	FILM	0.1uF	5%	50V

MAIN

Ref. No.	Part No.	Description			Remark
C652	1-136-165-00	FILM	0.1uF	5%	50V
C653	1-136-165-00	FILM	0.1uF	5%	50V
C654	1-136-165-00	FILM	0.1uF	5%	50V
C661	1-136-165-00	FILM	0.1uF	5%	50V
C662	1-136-165-00	FILM	0.1uF	5%	50V
C663	1-136-165-00	FILM	0.1uF	5%	50V
C664	1-136-165-00	FILM	0.1uF	5%	50V
C665	1-136-165-00	FILM	0.1uF	5%	50V
C666	1-136-165-00	FILM	0.1uF	5%	50V
C667	1-136-165-00	FILM	0.1uF	5%	50V
C668	1-124-443-00	ELECT	100uF	20%	10V
C669	1-136-165-00	FILM	0.1uF	5%	50V
C670	1-124-443-00	ELECT	100uF	20%	10V
C671	1-124-443-00	ELECT	100uF	20%	10V
C672	1-136-165-00	FILM	0.1uF	5%	50V
C673	1-124-443-00	ELECT	100uF	20%	10V
C674	1-136-165-00	FILM	0.1uF	5%	50V
C675	1-136-165-00	FILM	0.1uF	5%	50V
C683	1-136-165-00	FILM	0.1uF	5%	50V
C684	1-126-941-11	ELECT	470uF	20%	6.3V
C901	1-124-563-11	ELECT	2200uF	20%	25V
C902	1-126-939-11	ELECT	10000uF	20%	16V
C903	1-126-941-11	ELECT	470uF	20%	6.3V
C904	1-126-916-11	ELECT	1000uF	20%	6.3V
C905	1-124-919-11	ELECT	220uF	20%	63V
C906	1-124-122-11	ELECT	100uF	20%	50V
C907	1-162-306-11	CERAMIC	0.01uF	20%	16V
C908	1-162-306-11	CERAMIC	0.01uF	20%	16V
C910	1-124-564-11	ELECT	4700uF	20%	25V
C911	1-124-902-00	ELECT	0.47uF	20%	50V
C912	1-126-942-61	ELECT	1000uF	20%	16V
C913	1-162-306-11	CERAMIC	0.01uF	20%	16V
C920	1-124-564-11	ELECT	4700uF	20%	25V
C921	1-162-306-11	CERAMIC	0.01uF	20%	16V
C922	1-126-942-61	ELECT	1000uF	20%	16V
C923	1-162-306-11	CERAMIC	0.01uF	20%	16V
C998	1-164-159-11	CERAMIC	0.1uF		50V
C999	1-164-159-11	CERAMIC	0.1uF		50V

< CONNECTOR >

* CN301	1-564-706-31	PIN, CONNECTOR (SMALL TYPE) 4P	
* CN302	1-568-845-11	SOCKET, CONNECTOR 31P	
* CN303	1-568-836-11	SOCKET, CONNECTOR 17P	
CN341	1-770-164-11	PIN, CONNECTOR (PC BOARD) 15P	
* CN401	1-564-339-00	PIN, CONNECTOR 5P	
* CN601	1-564-708-11	PIN, CONNECTOR (SMALL TYPE) 6P	
CN651	1-564-510-11	PLUG (MICRO CONNECTOR) 6P	
CN691	1-573-095-11	SOCKET, CONNECTOR 15P	
CN901	1-691-767-11	PLUG (MICRO CONNECTOR) 5P	
CN902	1-691-768-11	PLUG (MICRO CONNECTOR) 6P	

< DIODE >

D101	8-719-987-63	DIODE	1N4148M
D102	8-719-987-63	DIODE	1N4148M
D103	8-719-987-63	DIODE	1N4148M
D104	8-719-987-63	DIODE	1N4148M
D151	8-719-987-63	DIODE	1N4148M
D152	8-719-987-63	DIODE	1N4148M
D153	8-719-987-63	DIODE	1N4148M
D154	8-719-987-63	DIODE	1N4148M
D321	8-719-987-63	DIODE	1N4148M
D331	8-719-987-63	DIODE	1N4148M
D333	8-719-987-63	DIODE	1N4148M
D411	8-719-200-82	DIODE	11ES2
D412	8-719-200-82	DIODE	11ES2
D413	8-719-200-82	DIODE	11ES2
D421	8-719-200-82	DIODE	11ES2
D422	8-719-200-82	DIODE	11ES2
D501	8-719-045-72	DIODE	KV1550NT
D651	8-719-987-63	DIODE	1N4148M
D901	8-719-200-77	DIODE	10E2N
D902	8-719-200-77	DIODE	10E2N
D903	8-719-200-77	DIODE	10E2N
D904	8-719-200-77	DIODE	10E2N
D905	8-719-312-47	DIODE	RBA-406B
D906	8-719-200-82	DIODE	11ES2
D907	8-719-987-63	DIODE	1N4148M
D908	8-719-015-13	DIODE	UZP-9.1BC-TP
D911	8-719-200-77	DIODE	10E2N
D912	8-719-200-77	DIODE	10E2N
D913	8-719-200-77	DIODE	10E2N
D914	8-719-200-77	DIODE	10E2N

< FUSE >

⚠F901	1-532-286-00	FUSE TIME-LAG (2.5A/250V) (AEP, UK, German)
⚠F901	1-576-105-11	FUSE (2.5A/250V) (US, Canadian)
⚠F911	1-532-774-11	FUSE, MICRO (SECONDARY) (US, Canadian)
⚠F912	1-532-774-11	FUSE, MICRO (SECONDARY) (US, Canadian)

< IC >

IC301	8-759-927-72	IC	TL1591CP
IC302	8-759-701-01	IC	NJM2904M
IC304	8-752-355-55	IC	CXD2605Q
IC305	8-752-337-79	IC	CXK58257AM-10LL
IC306	8-759-925-90	IC	SN74HC74ANS
IC308	8-759-634-43	IC	M51953BFP
IC310	8-752-878-46	IC	CXP87532-028Q
IC331	8-759-242-84	IC	TORX176 (OPTICAL IN)

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Ref. No.	Part No.	Description	Remark
IC332	8-759-242-85	IC TOTX176 (OPTICAL OUT)	
IC421	8-759-823-94	IC LB1836M	
IC431	8-759-701-01	IC NJM2904M	
IC441	8-759-701-01	IC NJM2904M	
IC451	8-759-701-01	IC NJM2904M	
IC501	8-759-242-70	IC TC7WU04F	
IC601	8-759-602-83	IC M5238P	
IC602	8-759-602-83	IC M5238P	
IC603	8-759-330-53	IC CXD8493M-E1	
IC604	8-759-094-53	IC TA7805S	
IC605	8-759-094-68	IC TA79005S-LBSONY	
IC606	8-759-094-53	IC TA7805S	
IC651	8-759-900-72	IC NE5532P	
IC652	8-759-900-72	IC NE5532P	
IC653	8-759-370-62	IC CXD8505BQ	
IC654	8-759-094-53	IC TA7805S	
IC901	8-759-504-46	IC PQ05RF1	
IC902	8-759-504-46	IC PQ05RF1	
IC903	8-759-602-66	IC M5230L-A	
IC999	8-759-426-52	IC AT24C01A-10SC-TP-B	
		< IC LINK >	
⚠IPC911	1-532-837-21	LINK, IC (630mA, 90VAC) (AEP, UK, German)	
⚠IPC921	1-532-837-21	LINK, IC (630mA, 90VAC) (AEP, UK, German)	
		< JACK >	
* J101	1-569-443-11	JACK, PIN 4P (ANALOG IN/OUT)	
J331	1-770-905-11	JACK, PIN 1P (ANALOG IN)	
		< COIL >	
L301	1-410-324-11	INDUCTOR 4.7uH	
L302	1-410-509-11	INDUCTOR 10uH	
L331	1-410-509-11	INDUCTOR 10uH	
L341	1-410-515-11	INDUCTOR 33uH	
L501	1-410-499-41	INDUCTOR 1.5uH	
L502	1-410-509-11	INDUCTOR 10uH	
L601	1-410-509-11	INDUCTOR 10uH	
L991	1-410-509-11	INDUCTOR 10uH	
		< TRANSISTOR >	
Q221	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q271	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q321	8-729-900-89	TRANSISTOR UN4213-TA	
Q322	8-729-900-89	TRANSISTOR DTC144ES	
Q340	8-729-620-05	TRANSISTOR UN4213-TA	
Q341	8-729-900-89	TRANSISTOR UN4213-TA	
Q342	8-729-422-57	TRANSISTOR UN4111	
Q351	8-729-119-76	TRANSISTOR 2SA1175-HFE	

Ref. No.	Part No.	Description	Remark
Q411	8-729-900-80	TRANSISTOR UN4211-TA	
Q412	8-729-927-12	TRANSISTOR 2SC4115SQR	
Q413	8-729-900-80	TRANSISTOR UN4211-TA	
Q414	8-729-927-11	TRANSISTOR 2SA1585SQR	
Q441	8-729-801-93	TRANSISTOR 2SD1387	
Q451	8-729-141-83	TRANSISTOR 2SB1094-LK	
Q452	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q453	8-729-927-11	TRANSISTOR 2SA1585SQR	
Q454	8-729-927-12	TRANSISTOR 2SC4115SQR	
Q455	8-729-927-11	TRANSISTOR 2SA1585SQR	
Q456	8-729-927-12	TRANSISTOR 2SC4115SQR	
Q457	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q458	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q459	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q481	8-729-801-93	TRANSISTOR 2SD1387	
Q503	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q504	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q505	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q601	8-729-900-80	TRANSISTOR UN4211-TA	
Q651	8-729-422-57	TRANSISTOR UN4111	
Q654	8-729-900-80	TRANSISTOR UN4211-TA	
Q902	8-729-140-97	TRANSISTOR 2SB734-34	
Q903	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q911	8-729-141-83	TRANSISTOR 2SB1094-LK	
Q921	8-729-209-15	TRANSISTOR 2SD2012	
		< RESISTOR >	
R102	1-249-441-11	CARBON 100K 5% 1/4W	
R103	1-249-433-11	CARBON 22K 5% 1/4W	
R104	1-247-887-00	CARBON 220K 5% 1/4W	
R105	1-249-425-11	CARBON 4.7K 5% 1/4W	
R106	1-249-425-11	CARBON 4.7K 5% 1/4W	
R107	1-249-401-11	CARBON 47 5% 1/4W	
R108	1-249-401-11	CARBON 47 5% 1/4W	
R152	1-249-441-11	CARBON 100K 5% 1/4W	
R153	1-249-433-11	CARBON 22K 5% 1/4W	
R154	1-247-887-00	CARBON 220K 5% 1/4W	
R155	1-249-425-11	CARBON 4.7K 5% 1/4W	
R156	1-249-425-11	CARBON 4.7K 5% 1/4W	
R157	1-249-401-11	CARBON 47 5% 1/4W	
R158	1-249-401-11	CARBON 47 5% 1/4W	
R201	1-259-440-11	CARBON 3.3K 1% 1/6W	
R202	1-259-440-11	CARBON 3.3K 1% 1/6W	
R203	1-259-440-11	CARBON 3.3K 1% 1/6W	
R204	1-259-440-11	CARBON 3.3K 1% 1/6W	
R205	1-259-436-11	CARBON 2.2K 1% 1/6W	
R206	1-259-436-11	CARBON 2.2K 1% 1/6W	
R207	1-259-444-11	CARBON 4.7K 1% 1/6W	

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MAIN

Ref. No.	Part No.	Description			Remark
R208	1-259-444-11	CARBON	4.7K	1%	1/6W
R209	1-249-419-11	CARBON	1.5K	5%	1/4W
R210	1-249-419-11	CARBON	1.5K	5%	1/4W
R211	1-249-441-11	CARBON	100K	5%	1/4W
R212	1-247-807-31	CARBON	100	5%	1/4W
R213	1-249-409-11	CARBON	220	5%	1/4W
R214	1-249-407-11	CARBON	150	5%	1/4W
R221	1-249-441-11	CARBON	100K	5%	1/4W
R222	1-249-425-11	CARBON	4.7K	5%	1/4W
R251	1-259-440-11	CARBON	3.3K	1%	1/6W
R252	1-259-440-11	CARBON	3.3K	1%	1/6W
R253	1-259-440-11	CARBON	3.3K	1%	1/6W
R254	1-259-440-11	CARBON	3.3K	1%	1/6W
R255	1-259-436-11	CARBON	2.2K	1%	1/6W
R256	1-259-436-11	CARBON	2.2K	1%	1/6W
R257	1-259-444-11	CARBON	4.7K	1%	1/6W
R258	1-259-444-11	CARBON	4.7K	1%	1/6W
R259	1-249-419-11	CARBON	1.5K	5%	1/4W
R260	1-249-419-11	CARBON	1.5K	5%	1/4W
R261	1-249-441-11	CARBON	100K	5%	1/4W
R262	1-247-807-31	CARBON	100	5%	1/4W
R263	1-249-409-11	CARBON	220	5%	1/4W
R264	1-249-407-11	CARBON	150	5%	1/4W
R272	1-249-425-11	CARBON	4.7K	5%	1/4W
R303	1-249-437-11	CARBON	47K	5%	1/4W
R305	1-249-429-11	CARBON	10K	5%	1/4W
R306	1-249-429-11	CARBON	10K	5%	1/4W
R307	1-249-409-11	CARBON	220	5%	1/4W
R308	1-249-429-11	CARBON	10K	5%	1/4W
R310	1-249-409-11	CARBON	220	5%	1/4W
R321	1-249-433-11	CARBON	22K	5%	1/4W
R322	1-249-437-11	CARBON	47K	5%	1/4W
R323	1-249-413-11	CARBON	470	5%	1/4W
R329	1-249-428-11	CARBON	8.2K	5%	1/4W
R330	1-249-409-11	CARBON	220	5%	1/4W
R331	1-247-804-11	CARBON	75	5%	1/4W
R332	1-249-437-11	CARBON	47K	5%	1/4W
R333	1-249-417-11	CARBON	1K	5%	1/4W
R334	1-249-401-11	CARBON	47	5%	1/4W
R335	1-247-807-31	CARBON	100	5%	1/4W
R336	1-249-431-11	CARBON	15K	5%	1/4W
R337	1-249-421-11	CARBON	2.2K	5%	1/4W
R338	1-249-421-11	CARBON	2.2K	5%	1/4W
R339	1-249-435-11	CARBON	33K	5%	1/4W
R340	1-249-429-11	CARBON	10K	5%	1/4W
R341	1-249-425-11	CARBON	4.7K	5%	1/4W
R342	1-249-425-11	CARBON	4.7K	5%	1/4W
R343	1-249-425-11	CARBON	4.7K	5%	1/4W
R344	1-249-437-11	CARBON	47K	5%	1/4W

Ref. No.	Part No.	Description			Remark
R345	1-249-413-11	CARBON	470	5%	1/4W
R351	1-249-441-11	CARBON	100K	5%	1/4W
R352	1-249-441-11	CARBON	100K	5%	1/4W
R353	1-249-441-11	CARBON	100K	5%	1/4W
R354	1-249-441-11	CARBON	100K	5%	1/4W
R355	1-249-437-11	CARBON	47K	5%	1/4W
R356	1-249-437-11	CARBON	47K	5%	1/4W
R357	1-249-429-11	CARBON	10K	5%	1/4W
R358	1-249-429-11	CARBON	10K	5%	1/4W
R359	1-249-429-11	CARBON	10K	5%	1/4W
R360	1-249-429-11	CARBON	10K	5%	1/4W
R361	1-249-429-11	CARBON	10K	5%	1/4W
R362	1-249-413-11	CARBON	470	5%	1/4W
R363	1-249-429-11	CARBON	10K	5%	1/4W
R364	1-249-429-11	CARBON	10K	5%	1/4W
R365	1-249-429-11	CARBON	10K	5%	1/4W
R366	1-249-429-11	CARBON	10K	5%	1/4W
R368	1-249-435-11	CARBON	33K	5%	1/4W
R369	1-249-435-11	CARBON	33K	5%	1/4W
R370	1-249-437-11	CARBON	47K	5%	1/4W
R371	1-249-441-11	CARBON	100K	5%	1/4W
R373	1-249-417-11	CARBON	1K	5%	1/4W
R374	1-249-429-11	CARBON	10K	5%	1/4W
R375	1-249-429-11	CARBON	10K	5%	1/4W
R376	1-249-429-11	CARBON	10K	5%	1/4W
R377	1-249-429-11	CARBON	10K	5%	1/4W
R378	1-249-407-11	CARBON	150	5%	1/4W
R379	1-249-417-11	CARBON	1K	5%	1/4W
R380	1-249-437-11	CARBON	47K	5%	1/4W
R381	1-249-409-11	CARBON	220	5%	1/4W
R382	1-249-411-11	CARBON	330	5%	1/4W
R383	1-249-411-11	CARBON	330	5%	1/4W
R391	1-249-437-11	CARBON	47K	5%	1/4W
R411	1-249-429-11	CARBON	10K	5%	1/4W
R412	1-249-415-11	CARBON	680	5%	1/4W
R413	1-249-415-11	CARBON	680	5%	1/4W
⚠R414	1-217-639-00	FUSIBLE	2.2	5%	1/4W F
R415	1-249-415-11	CARBON	680	5%	1/4W
R416	1-249-415-11	CARBON	680	5%	1/4W
R431	1-247-887-00	CARBON	220K	5%	1/4W
R432	1-247-887-00	CARBON	220K	5%	1/4W
R433	1-247-887-00	CARBON	220K	5%	1/4W
R434	1-249-441-11	CARBON	100K	5%	1/4W
R441	1-249-429-11	CARBON	10K	5%	1/4W
R442	1-249-429-11	CARBON	10K	5%	1/4W
R443	1-249-429-11	CARBON	10K	5%	1/4W
R444	1-249-429-11	CARBON	10K	5%	1/4W
R445	1-249-433-11	CARBON	22K	5%	1/4W

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Ref. No.	Part No.	Description				Remark
R446	1-249-401-11	CARBON	47	5%	1/4W	
R447	1-249-441-11	CARBON	100K	5%	1/4W	
R449	1-249-441-11	CARBON	100K	5%	1/4W	
R450	1-249-417-11	CARBON	1K	5%	1/4W	
R451	1-249-441-11	CARBON	100K	5%	1/4W	
R452	1-249-417-11	CARBON	1K	5%	1/4W	
R453	1-249-429-11	CARBON	10K	5%	1/4W	
R454	1-249-429-11	CARBON	10K	5%	1/4W	
R455	1-249-441-11	CARBON	100K	5%	1/4W	
R456	1-249-417-11	CARBON	1K	5%	1/4W	
R457	1-249-417-11	CARBON	1K	5%	1/4W	
R458	1-247-807-31	CARBON	100	5%	1/4W	
R459	1-247-807-31	CARBON	100	5%	1/4W	
R461	1-247-807-31	CARBON	100	5%	1/4W	
R462	1-249-417-11	CARBON	1K	5%	1/4W	
R463	1-249-417-11	CARBON	1K	5%	1/4W	
R464	1-247-807-31	CARBON	100	5%	1/4W	
R465	1-249-417-11	CARBON	1K	5%	1/4W	
R466	1-249-441-11	CARBON	100K	5%	1/4W	
R471	1-249-441-11	CARBON	100K	5%	1/4W	
R472	1-249-441-11	CARBON	100K	5%	1/4W	
R481	1-249-441-11	CARBON	100K	5%	1/4W	
R482	1-249-401-11	CARBON	47	5%	1/4W	
R483	1-249-437-11	CARBON	47K	5%	1/4W	
R484	1-249-437-11	CARBON	47K	5%	1/4W	
R485	1-249-441-11	CARBON	100K	5%	1/4W	
R491	1-249-417-11	CARBON	1K	5%	1/4W	
R492	1-249-417-11	CARBON	1K	5%	1/4W	
R493	1-249-407-11	CARBON	150	5%	1/4W	
R494	1-247-807-31	CARBON	100	5%	1/4W	
R501	1-249-417-11	CARBON	1K	5%	1/4W	
R502	1-249-429-11	CARBON	10K	5%	1/4W	
R503	1-249-441-11	CARBON	100K	5%	1/4W	
R516	1-249-429-11	CARBON	10K	5%	1/4W	
R517	1-249-417-11	CARBON	1K	5%	1/4W	
R518	1-249-401-11	CARBON	47	5%	1/4W	
R526	1-249-429-11	CARBON	10K	5%	1/4W	
R527	1-249-429-11	CARBON	10K	5%	1/4W	
R528	1-247-903-00	CARBON	1M	5%	1/4W	
R601	1-249-413-11	CARBON	470	5%	1/4W	
R603	1-249-437-11	CARBON	47K	5%	1/4W	
R604	1-249-413-11	CARBON	470	5%	1/4W	
R661	1-247-903-00	CARBON	1M	5%	1/4W	
⚠R902	1-212-873-11	FUSIBLE	47	5%	1/4W	F
R903	1-260-111-11	CARBON	10K	5%	1/2W	
R904	1-249-433-11	CARBON	22K	5%	1/4W	
R905	1-249-425-11	CARBON	4.7K	5%	1/4W	
R906	1-249-433-11	CARBON	22K	5%	1/4W	
R907	1-249-437-11	CARBON	47K	5%	1/4W	
R911	1-247-807-31	CARBON	100	5%	1/4W	
R912	1-247-807-31	CARBON	100	5%	1/4W	
R913	1-249-401-11	CARBON	47	5%	1/4W	
R914	1-249-409-11	CARBON	220	5%	1/4W	
R915	1-249-433-11	CARBON	22K	5%	1/4W	
R917	1-249-431-11	CARBON	15K	5%	1/4W	
R918	1-249-425-11	CARBON	4.7K	5%	1/4W	
R923	1-249-401-11	CARBON	47	5%	1/4W	
R924	1-249-409-11	CARBON	220	5%	1/4W	
R927	1-249-431-11	CARBON	15K	5%	1/4W	
⚠R931	1-219-123-11	FUSIBLE	0.47	5%	1/4W	F
R981	1-249-411-11	CARBON	330	5%	1/4W	
R982	1-249-409-11	CARBON	220	5%	1/4W	
R983	1-249-409-11	CARBON	220	5%	1/4W	
R984	1-249-415-11	CARBON	680	5%	1/4W	
R985	1-249-409-11	CARBON	220	5%	1/4W	
R986	1-249-417-11	CARBON	1K	5%	1/4W	
R991	1-249-429-11	CARBON	10K	5%	1/4W	
R992	1-249-427-11	CARBON	6.8K	5%	1/4W	
R998	1-249-409-11	CARBON	220	5%	1/4W	
R1519	1-249-421-11	CARBON	2.2K	5%	1/4W	
		< VARIABLE RESISTOR >				
RV451	1-241-765-11	RES, ADJ, CARBON 22K				
		< RELAY >				
RY651	1-515-803-11	RELAY				
		< VIBRATOR >				
X301	1-567-816-11	VIBRATOR, CRYSTAL (18MHZ)				
X302	1-567-815-11	VIBRATOR, CRYSTAL (22MHZ)				
X303	1-567-814-11	VIBRATOR, CRYSTAL (24MHZ)				

****

*	1-661-999-11	PRIMARY BOARD				
		**********				
*	3-346-266-12	PLATE, GROUND				
		< CAPACITOR >				
⚠C001	1-113-916-11	CERAMIC	0.01uF	20%	250V	
⚠C002	1-113-916-11	CERAMIC	0.01uF	20%	250V	
⚠C003	1-113-920-11	CERAMIC	0.0022uF	20%	250V	
⚠C004	1-113-920-11	CERAMIC	0.0022uF	20%	250V	
⚠C005	1-113-920-11	CERAMIC	0.0022uF	20%	250V	
		< CONNECTOR >				
CN001	1-580-230-11	PIN, CONNECTOR (PC BOARD) 2P				

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

PRIMARY **REC VOL** **REEL MOTOR** **RF AMP**

Ref. No.	Part No.	Description			Remark
CN002	1-580-230-51	PIN, CONNECTOR (PC BOARD) 2P			
CN003	1-564-321-00	PIN, CONNECTOR 2P			
		< COIL >			
⚠L001	1-424-485-11	FILTER, LINE			
**********					
*	1-662-000-11	REC VOL BOARD			
		**********			
		< CONNECTOR >			
* CN602	1-564-708-11	PIN, CONNECTOR (SMALL TYPE) 6P			
		< RESISTOR >			
R101	1-249-434-11	CARBON	27K	5%	1/4W
R151	1-249-434-11	CARBON	27K	5%	1/4W
		< VARIABLE RESISTOR >			
RV101	1-241-937-11	RES, VAR, CARBON 20K/20K(REC LEVEL)			
**********					
*	1-639-304-14	REEL MOTOR BOARD			
		**********			
		< CAPACITOR >			
C07	1-163-077-00	CERAMIC CHIP	0.1uF	10%	25V
**********					
*	A-2006-455-A	RF AMP BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C1	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C2	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C3	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C4	1-107-682-11	CERAMIC CHIP	1uF	10%	16V
C5	1-164-299-11	CERAMIC CHIP	0.22uF	10%	25V
C6	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C7	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C8	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C9	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C10	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C11	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C12	1-164-299-11	CERAMIC CHIP	0.22uF	10%	25V
C13	1-107-682-11	CERAMIC CHIP	1uF	10%	16V
C14	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C15	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C16	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C17	1-163-001-11	CERAMIC CHIP	220PF	10%	50V
C18	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C19	1-163-001-11	CERAMIC CHIP	220PF	10%	50V
C20	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
C21	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C22	1-126-603-11	ELECT CHIP	4.7uF	20%	35V
C23	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C24	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C25	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C26	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C27	1-107-682-11	CERAMIC CHIP	1uF	10%	16V
C28	1-164-505-11	CERAMIC CHIP	2.2uF		16V
		< CONNECTOR >			
* CN51	1-566-207-11	PIN, CONNECTOR (PC BOARD) 14P			
* CN52	1-564-720-11	PIN, CONNECTOR (SMALL TYPE) 4P			
		< IC >			
IC1	8-752-039-01	IC CXA1364R			
		< COIL >			
L1	1-408-781-00	INDUCTOR CHIP	22uH		
L2	1-408-789-21	INDUCTOR CHIP	100uH		
L3	1-408-781-00	INDUCTOR CHIP	22uH		
		< RESISTOR >			
R1	1-216-082-00	METAL GLAZE	24K	5%	1/10W
R2	1-216-082-00	METAL GLAZE	24K	5%	1/10W
R3	1-216-066-00	METAL CHIP	5.1K	5%	1/10W
R4	1-216-066-00	METAL CHIP	5.1K	5%	1/10W
R5	1-216-077-00	METAL CHIP	15K	5%	1/10W
R6	1-216-077-00	METAL CHIP	15K	5%	1/10W
R7	1-216-077-00	METAL CHIP	15K	5%	1/10W
R8	1-216-079-00	METAL CHIP	18K	5%	1/10W
R9	1-216-075-00	METAL CHIP	12K	5%	1/10W
R10	1-216-079-00	METAL CHIP	18K	5%	1/10W
R11	1-216-077-00	METAL CHIP	15K	5%	1/10W
R12	1-216-077-00	METAL CHIP	15K	5%	1/10W
R13	1-216-077-00	METAL CHIP	15K	5%	1/10W
R14	1-216-081-00	METAL CHIP	22K	5%	1/10W
R15	1-216-085-00	METAL CHIP	33K	5%	1/10W
R16	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R17	1-216-080-00	METAL CHIP	20K	5%	1/10W
R18	1-216-073-00	METAL CHIP	10K	5%	1/10W
		< VARIABLE RESISTOR >			
RV1	1-238-181-11	RES, ADJ, CERMET 4.7K			
RV2	1-238-181-11	RES, ADJ, CERMET 4.7K			
**********					

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

RGN SW | SBM DF | SOUSA SWITCH | TOP END SENSOR

Ref. No.	Part No.	Description				Remark
*	1-639-301-11	RGN SW BOARD				
		**********				
		< SWITCH >				
S01	1-571-878-11	SWITCH, PUSH (2 KEY) (CASSETT IN, REC PROOF)				
**********						
*	1-656-335-11	SBM DF BOARD				
		**********				
		< CAPACITOR >				
C631	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C632	1-162-282-31	CERAMIC	100PF	10%	50V	
C633	1-164-159-11	CERAMIC	0.1uF		50V	
C634	1-164-159-11	CERAMIC	0.1uF		50V	
		< CONNECTOR >				
CN692	1-573-109-11	PIN, CONNECTOR 15P				
		< IC >				
IC607	8-759-196-21	IC CXD8482Q				
		< RESISTOR >				
R631	1-249-417-11	CARBON	1K	5%	1/4W	
**********						
*	A-2007-605-A	SOUSA SWITCH BOARD				
		**********				
		< RESISTOR >				
R802	1-249-415-11	CARBON	680	5%	1/4W	
R803	1-249-417-11	CARBON	1K	5%	1/4W	
R804	1-249-419-11	CARBON	1.5K	5%	1/4W	
R805	1-247-843-11	CARBON	3.3K	5%	1/4W	
R806	1-249-425-11	CARBON	4.7K	5%	1/4W	
R812	1-249-415-11	CARBON	680	5%	1/4W	
R813	1-249-417-11	CARBON	1K	5%	1/4W	
R814	1-249-419-11	CARBON	1.5K	5%	1/4W	
R815	1-247-843-11	CARBON	3.3K	5%	1/4W	
R816	1-249-425-11	CARBON	4.7K	5%	1/4W	
R817	1-249-429-11	CARBON	10K	5%	1/4W	
R827	1-249-429-11	CARBON	10K	5%	1/4W	
R828	1-249-435-11	CARBON	33K	5%	1/4W	
R837	1-249-433-11	CARBON	22K	5%	1/4W	
R838	1-249-435-11	CARBON	33K	5%	1/4W	
R857	1-249-433-11	CARBON	22K	5%	1/4W	
R858	1-249-435-11	CARBON	33K	5%	1/4W	

Ref. No.	Part No.	Description	Remark
		< SWITCH >	
S801	1-554-937-11	SWITCH, KEY BOARD (⏏) (OPEN/CLOSE)	
S802	1-554-937-11	SWITCH, KEY BOARD (■)	
S803	1-554-937-11	SWITCH, KEY BOARD (▶)	
S804	1-554-937-11	SWITCH, KEY BOARD (⏮) (AMS)	
S805	1-554-937-11	SWITCH, KEY BOARD (⏭) (AMS)	
S811	1-554-937-11	SWITCH, KEY BOARD (◀◀)	
S812	1-554-937-11	SWITCH, KEY BOARD (▶▶)	
S813	1-554-937-11	SWITCH, KEY BOARD (●) (REC)	
S814	1-554-937-11	SWITCH, KEY BOARD (❚❚)	
S815	1-554-937-11	SWITCH, KEY BOARD (○) (REC MUTE)	
S827	1-572-268-11	SWITCH, SLIDE (REC MODE)	
S837	1-572-268-11	SWITCH, SLIDE (INPUT)	
S851	1-572-269-11	SWITCH, SLIDE (SBM)	
**********			
*	1-639-305-11	TOP END SENSOR BOARD	
		**********	
*	3-343-491-01	HOLDER (S SENSOR B)	
*	3-368-456-01	HOLDER (END SENSOR LIGHT)	
*	3-368-457-01	HOLDER (END SENSOR) (RECIEVE)	
		< DIODE >	
D01	8-719-988-42	DIODE GL453S	
		< PHOTO INTERRUPTER >	
PH03	8-729-907-25	PHOTO TRANSISTOR PT4850F	
PH04	8-729-907-25	PHOTO TRANSISTOR PT4850F	
**********			
		MISCELLANEOUS	
		**********	
64	1-775-464-11	WIRE (FLAT TYPE) (17 CORE)	
103	1-775-389-11	WIRE (FLAT TYPE) (31 CORE)	
219	8-848-567-12	DRUM ASSY DOU-03A	
⚠CN1	1-575-651-21	CORD, POWER (AEP, UK, German)	
⚠CN1	1-590-836-11	CORD, POWER (US, Canadian)	
M901	X-3370-655-1	MOTOR ASSY (CASSETTE COMPARTMENT)	
M902	8-835-361-01	MOTOR, DC U-17B (CAPSTAN)	
M903	X-3363-109-1	MOTOR (CAM) ASSY	
M905	X-3363-110-2	MOTOR (REEL) ASSY	
PM902	1-454-536-11	SOLENOID, PLUNGER	
PM903	1-454-732-11	SOLENOID, PLUNGER	
⚠T901	1-427-889-11	TRANSFORMER, POWER (US, Canadian)	
⚠T901	1-427-890-11	TRANSFORMER, POWER (AEP, UK, German)	
**********			

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
		**********	
		HARDWARE LIST	
		**********	
#1	7-685-871-01	SCREW +BVTT 3X6 (S)	
#2	7-685-646-79	SCREW +BVTP 3X8 TYPE2 SLIT	
#3	7-685-872-01	SCREW +BVTT 3X8 (S)	
#4	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S	
#5	7-621-773-86	SCREW +B 2.6X4	
#6	7-685-645-79	SCREW +BVTP 3X6 TYPE2 IT-3	
#7	7-627-556-17	SCREW, PRECISION +P 2.6X3 TYPE1	
#8	7-685-133-19	SCREW +BTP 2.6X6 TYPE2 N-S	
#9	7-685-102-19	SCREW +P 2X4 TYPE2 NON-SLIT	
#10	7-621-772-20	SCREW +B 2X5	
#12	7-621-772-08	SCREW +B 2X3	
#13	7-621-255-15	SCREW +P 2X3	
#14	7-621-772-18	SCREW +B 2X4	
#15	7-621-255-20	SCREW +BVTT 2X4 (S)	
#16	7-627-552-47	SCREW, PRECISION +P 1.7X4	
#17	7-685-533-19	SCREW +BTP 2.6X6 TYPE2 N-S	
#18	7-627-854-07	PRECISION SCREW +P 2X2.5 TYPE3	
#19	7-627-552-27	SCREW, PRECISION +P 1.7X2	
#20	7-627-852-27	+P 1.7X3	
#21	7-685-871-09	SCREW +BVTT 3X6 (S)	
#22	7-621-772-00	SCREW +B 2X3	
#23	7-627-450-28	+K 1.7X2	
**********			
		ACCESSORIES & PACKING MATERIALS	
		**********	
	1-473-921-11	REMOTE COMMANDER (RM-D757)	
	1-558-271-11	CORD, CONNECTION (AUDIO CONNECTING COARDS)	
	3-858-189-12	MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, PORTUGUESE) (Canadian, AEP, UK)	
	3-858-189-21	MANUAL, INSTRUCTION (ENGLISH) (US)	
	3-858-189-31	MANUAL, INSTRUCTION (GERMAN) (German)	
	3-858-189-42	MANUAL, INSTRUCTION (GERMAN, DUTCH, SWEDISH, ITALIAN) (AEP, UK)	
	4-981-643-01	LID, BATTERY CASE (for RM-D757)	
*	4-984-971-01	CUSHION	

Sony Corporation
Home A&V Products Company

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Published by Quality Service and Safetey Engineering Dept. (Shibaura)

DTC-ZE700

SONY

AEP Model
UK Model

SERVICE MANUAL

SUPPLEMENT-1

File this supplement with the service manual.

Subject: DETECTION Board Addition

(ECN-TC600466)

- This detection switch (board) is added with the purpose of displaying properly the remaining time for the DAT tapes having the capacity over 120 minutes.

Longtime tapes
Use a tape of capacity below 120 minutes, if making an important recording.
A longtime tape over 120 minutes is very thin and easily expandable more than normal tapes, thus causing the following troubles:
- Repeated cue/review, AMS search, fast feed/rewind, etc. will cause the tape to be caught in the machine.
- Start ID failure
- Low sound quality

- The detection switch (board) is added except the serial No. given below:

Serial No.
#501001 – #501093
#4500001 – #4500300

1. MODIFICATION DUE TO ADDITION OF THE DETECTION BOARD

As the DETECTION board was added during the production. According to this change the suffix number of the DRUM DRIVE board has been changed from [15] to [16]. (The pattern has not been changed.)
Depending on whether the DETECTION board is present or not, some circuits must be changed. For replacing parts, refer to the table below.

- Difference List

FORMER TYPE Unit without DETECTION board (DRUM DRIVE board suffix No. [14] or [15])						FORMER TYPE Unit with DETECTION board (DRUM DRIVE board suffix No. [16])
Ref. No.	Part No.	Description				
	*** DRUM DRIVE BOARD ***					*** DRUM DRIVE BOARD ***
JW06	1-216-296-00	METAL CHIP	0	5%	1/8W	Not used

Note: When replacing the DRUM DRIVE board, check JW06 is present or not.
- If an unit without DETECTION board is not equipped with JW06, the unit dose not operate correctly.
- JW06 in not needed for an unit with DETECTION board. In case the DRUM DRIVE board for replacement has JW06, it should be eliminated.

9-960-744-81

Sony Corporation
Home A & V Products Company

96L057553-1
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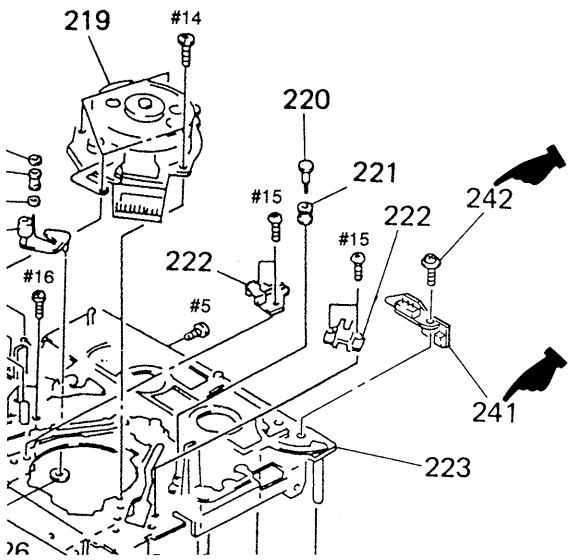
2. EXPLODED VIEWS

: indicates added portion

Mechanism Section 1 (DATM-110)
(Service Manual Page 51)



Ref. No.	Part No.	Description	Remark
* 241	1-664-518-11	DETECTION BOARD	
242	3-321-041-01	SCREW (M1.7X3.5), TAPPING	

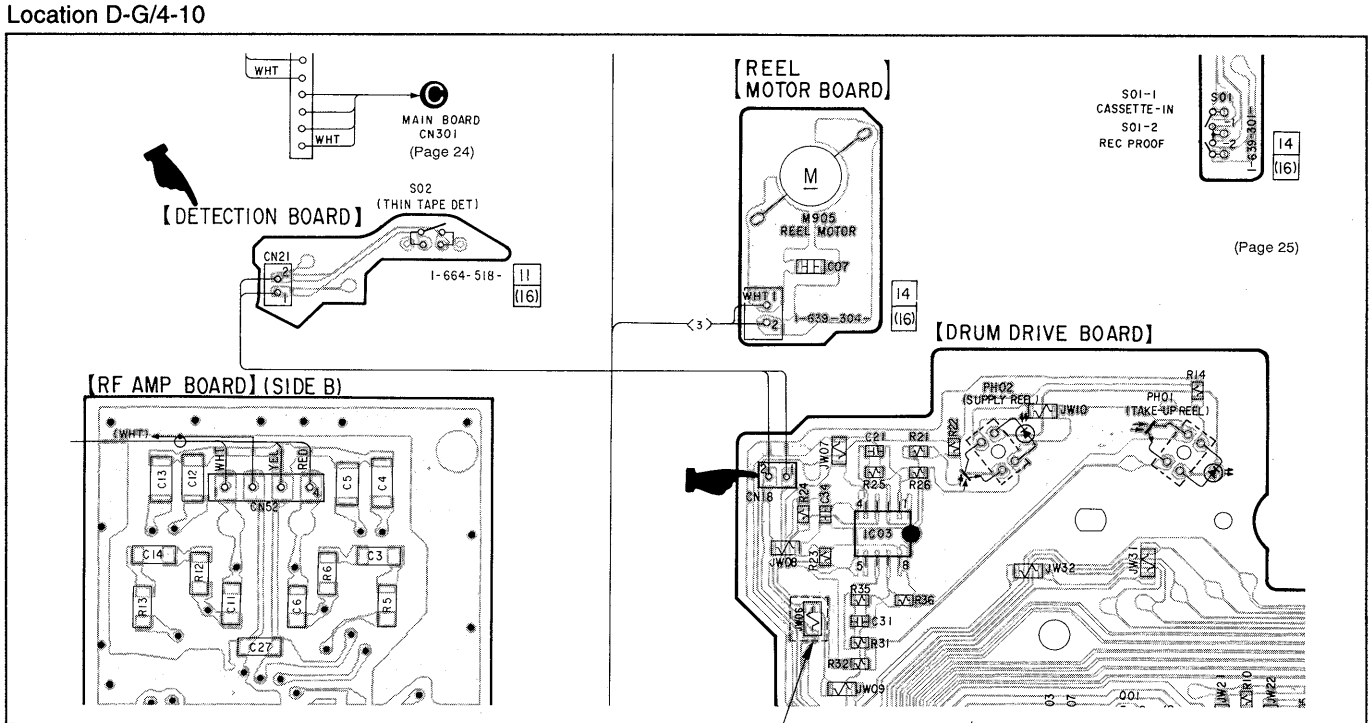
● Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

3. PRINTED WIRING BOARS

: indicates added portion

MD Section (Service Manual Page 29, 30)

Location D-G/4-10



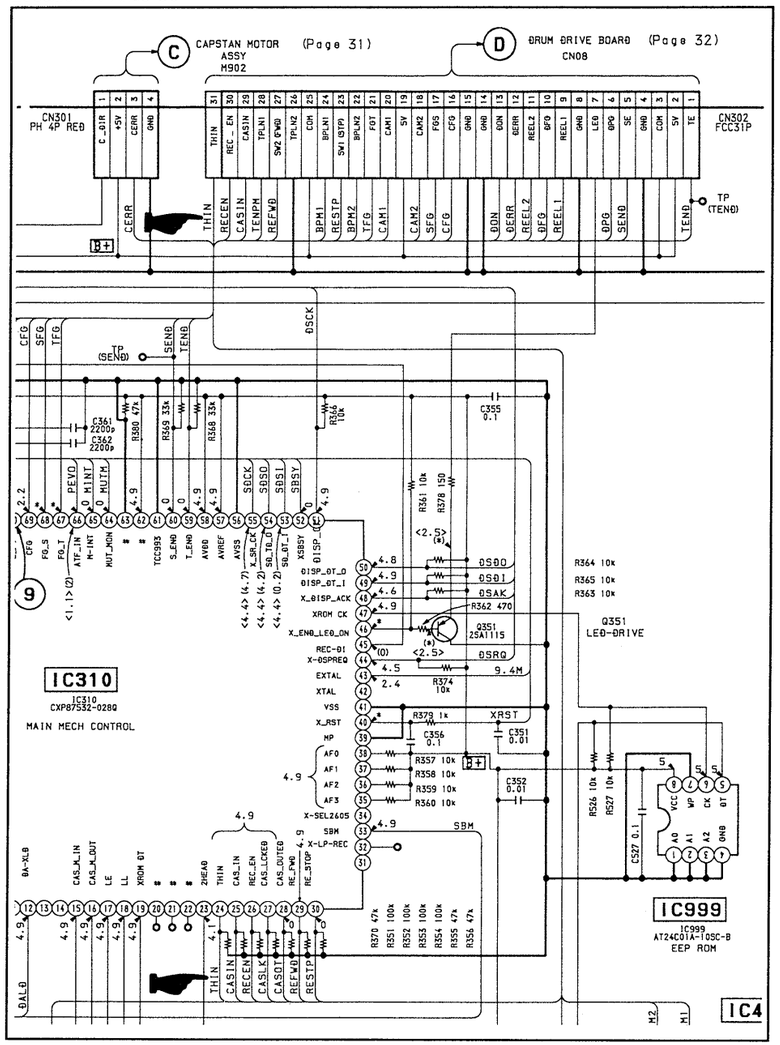
JW06: FORMER TYPE ONLY
(DRUM DRIVE BOARD SUFFIX No. 14 or 15)

4. SCHEMATIC DIAGRAMS

: indicates added portion

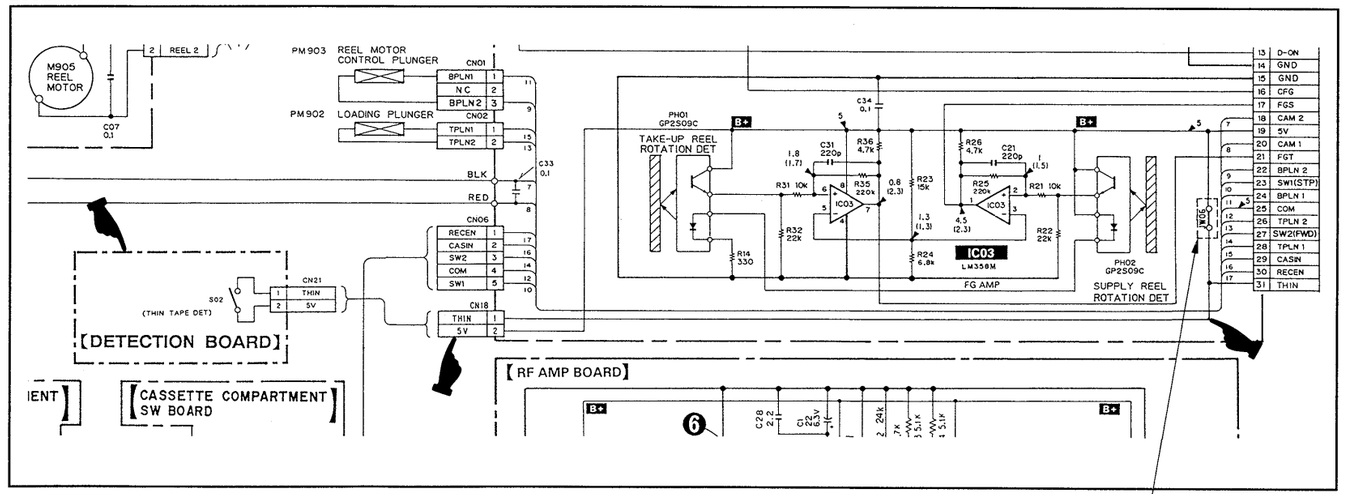
4-1. MAIN Section (Service Manual Page 18-22)

Location A-H/25-30



4-2. MD Section (Service Manual Page 31, 32)

Location C-F/3-11



JW06: FORMER TYPE ONLY
(DRUM DRIVE BOARD SUFFIX No. 14 or 15)

5. ELECTRICAL PARTS LIST

: indicates added portion

NOTE:
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description	Remark
*	A-2007-419-A	DRUM DRIVE BOARD, COMPLETE	
		**********	
		< CONNECTOR >	
* CN18	1-564-495-11	PIN, CONNECTOR 2P	
		**********	

Ref. No.	Part No.	Description	Remark
*	1-664-518-11	DETECTION BOARD	
		**********	
		< CONNECTOR >	
* CN21	1-564-336-61	PIN, CONNECTOR 2P	
		< SWITCH >	
S02	1-572-458-11	SWITCH, PUSH (THIN TAPE DET)	
		**********	

DTC-ZE700

SONY

SERVICE MANUAL

US Model
Canadian Model
AEP Model
UK Model

SUPPLEMENT-2

File this supplement with the service manual.

Subject: Changed pattern and circuit of the MAIN board

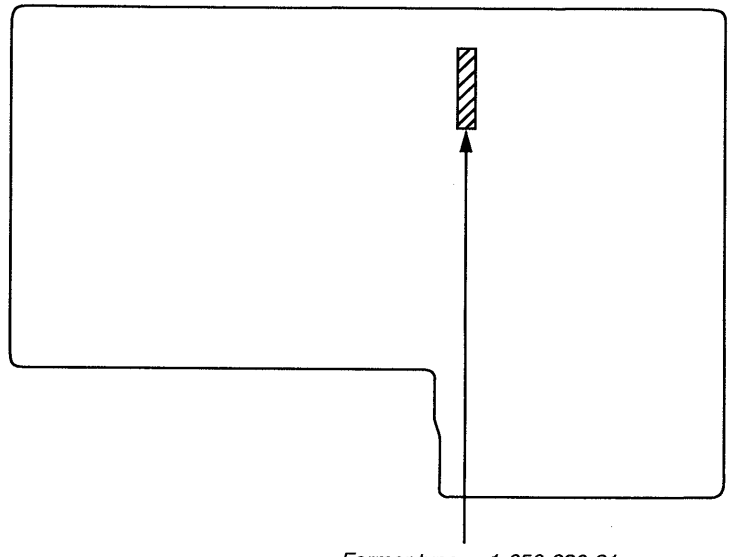
(ECN-TC600575/TC700005/TC700022)

- In this set, the pattern and circuit of MAIN board were changed during the production (for serial No., see the following table).
  For the schematic diagram, printed wiring boards, and electrical parts list of the MAIN board, see this service manual supplement-2.

Model	Serial Number
US model	After 800501
Canadian model	After A700101
AEP, UK models	After 502845
German model	After 4501003

- **New type discrimination**

[MAIN BOARD] (COMPONENT SIDE)



Former type : 1-656-336-21
New type : 1-656-336-22

9-960-744-84

Sony Corporation
Home A & V Products Company

97H0579-1
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MAIN

SECTION 1
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service.
  Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: μ, for example:
  uA. . : μA. . uPA. . : μPA. .
  uPB. . : μPB. . uPC. . : μPC. .
  uPD. . : μPD. .
- CAPACITORS
  uF: μF
- COILS
  uH: μH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité.
Ne les remplacer que par une pièce portant le neméro spécifié.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description				Remark
*	A-2007-610-A	MAIN BOARD, COMPLETE (AEP, UK, German)				
*	A-2007-612-A	MAIN BOARD, COMPLETE (US, Canadian)				
		**********				
*	1-533-213-31	HOLDER, FUSE				
	1-537-770-21	TERMINAL BOARD, GROUND				
*	3-309-144-21	HEAT SINK				
*	4-363-146-71	HEAT SINK, V.OUT				
	7-682-548-09	SCREW +B 3X8				
	7-685-871-01	SCREW +BVTT 3X6 (S)				
		< CAPACITOR >				
C101	1-104-664-11	ELECT	47uF	20%	25V	
C102	1-162-286-31	CERAMIC	220PF	10%	50V	
C103	1-104-664-11	ELECT	47uF	20%	25V	
C107	1-130-481-00	MYLAR	0.0068uF	5%	50V	
C151	1-104-664-11	ELECT	47uF	20%	25V	
C152	1-162-286-31	CERAMIC	220PF	10%	50V	
C153	1-104-664-11	ELECT	47uF	20%	25V	
C157	1-130-481-00	MYLAR	0.0068uF	5%	50V	
C201	1-130-471-00	MYLAR	0.001uF	5%	50V	
C202	1-110-341-11	MYLAR	330PF	5%	50V	
C203	1-110-341-11	MYLAR	330PF	5%	50V	
C204	1-130-471-00	MYLAR	0.001uF	5%	50V	
C205	1-130-479-00	MYLAR	0.0047uF	5%	50V	
C206	1-124-443-00	ELECT	100uF	20%	10V	
C207	1-162-302-11	CERAMIC	0.0022uF	30%	16V	
C251	1-130-471-00	MYLAR	0.001uF	5%	50V	
C252	1-110-341-11	MYLAR	330PF	5%	50V	
C253	1-110-341-11	MYLAR	330PF	5%	50V	
C254	1-130-471-00	MYLAR	0.001uF	5%	50V	
C255	1-130-479-00	MYLAR	0.0047uF	5%	50V	
C256	1-124-443-00	ELECT	100uF	20%	10V	
C257	1-162-302-11	CERAMIC	0.0022uF	30%	16V	
C302	1-162-197-31	CERAMIC	6.8PF	10%	50V	
C304	1-124-903-11	ELECT	1uF	20%	50V	
C307	1-164-159-11	CERAMIC	0.1uF		50V	
C308	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C309	1-124-443-00	ELECT	100uF	20%	10V	
C310	1-164-159-11	CERAMIC	0.1uF		50V	
C311	1-162-198-31	CERAMIC	8.2PF	10%	50V	
C312	1-162-199-31	CERAMIC	10PF	5%	50V	
C313	1-162-197-31	CERAMIC	6.8PF	10%	50V	
C314	1-162-197-31	CERAMIC	6.8PF	10%	50V	
C327	1-162-198-31	CERAMIC	8.2PF	10%	50V	
C331	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C332	1-164-159-11	CERAMIC	0.1uF		50V	
C333	1-162-211-31	CERAMIC	33PF	5%	50V	
C334	1-124-907-11	ELECT	10uF	20%	50V	
C335	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C336	1-164-159-11	CERAMIC	0.1uF		50V	
C337	1-164-159-11	CERAMIC	0.1uF		50V	
C338	1-164-159-11	CERAMIC	0.1uF		50V	
C340	1-164-159-11	CERAMIC	0.1uF		50V	
C341	1-164-159-11	CERAMIC	0.1uF		50V	
C342	1-124-442-00	ELECT	330uF	20%	6.3V	
C343	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C344	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C345	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C351	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C352	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C353	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C354	1-164-159-11	CERAMIC	0.1uF		50V	
C355	1-164-159-11	CERAMIC	0.1uF		50V	
C356	1-164-159-11	CERAMIC	0.1uF		50V	
C361	1-162-302-11	CERAMIC	0.0022uF	30%	16V	
C362	1-162-302-11	CERAMIC	0.0022uF	30%	16V	
C431	1-162-302-11	CERAMIC	0.0022uF	30%	16V	
C432	1-162-305-11	CERAMIC	0.0068uF	30%	16V	
C433	1-162-288-31	CERAMIC	330PF	10%	50V	

Ref. No.	Part No.	Description				Remark
C439	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C441	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C442	1-161-494-00	CERAMIC	0.022uF		25V	
C443	1-162-301-11	CERAMIC	0.0015uF	20%	16V	
C444	1-124-907-11	ELECT	10uF	20%	50V	
C445	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C451	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C452	1-126-963-11	ELECT	4.7uF	20%	50V	
C453	1-126-338-11	ELECT	47uF	20%	63V	
C454	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C459	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C471	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C481	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C491	1-162-290-31	CERAMIC	470PF	10%	50V	
C492	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C502	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C503	1-162-284-31	CERAMIC	150PF	10%	50V	
C507	1-136-153-00	FILM	0.01uF	5%	50V	
C509	1-164-159-11	CERAMIC	0.1uF		50V	
C511	1-164-159-11	CERAMIC	0.1uF		50V	
C515	1-136-169-00	FILM	0.22uF	5%	50V	
C527	1-164-159-11	CERAMIC	0.1uF		50V	
C601	1-136-165-00	FILM	0.1uF	5%	50V	
C602	1-136-165-00	FILM	0.1uF	5%	50V	
C621	1-124-907-11	ELECT	10uF	20%	50V	
C622	1-124-907-11	ELECT	10uF	20%	50V	
C623	1-136-165-00	FILM	0.1uF	5%	50V	
C624	1-136-165-00	FILM	0.1uF	5%	50V	
C625	1-136-165-00	FILM	0.1uF	5%	50V	
C626	1-136-165-00	FILM	0.1uF	5%	50V	
C627	1-126-941-11	ELECT	470uF	20%	6.3V	
C628	1-126-941-11	ELECT	470uF	20%	6.3V	
C630	1-124-907-11	ELECT	10uF	20%	50V	
C651	1-136-165-00	FILM	0.1uF	5%	50V	
C652	1-136-165-00	FILM	0.1uF	5%	50V	
C653	1-136-165-00	FILM	0.1uF	5%	50V	
C654	1-136-165-00	FILM	0.1uF	5%	50V	
C661	1-136-165-00	FILM	0.1uF	5%	50V	
C662	1-136-165-00	FILM	0.1uF	5%	50V	
C663	1-136-165-00	FILM	0.1uF	5%	50V	
C664	1-136-165-00	FILM	0.1uF	5%	50V	
C665	1-136-165-00	FILM	0.1uF	5%	50V	
C666	1-136-165-00	FILM	0.1uF	5%	50V	
C667	1-136-165-00	FILM	0.1uF	5%	50V	
C668	1-124-443-00	ELECT	100uF	20%	10V	
C669	1-136-165-00	FILM	0.1uF	5%	50V	
C670	1-124-443-00	ELECT	100uF	20%	10V	
C671	1-124-443-00	ELECT	100uF	20%	10V	
C672	1-136-165-00	FILM	0.1uF	5%	50V	
C673	1-124-443-00	ELECT	100uF	20%	10V	
C674	1-136-165-00	FILM	0.1uF	5%	50V	
C675	1-136-165-00	FILM	0.1uF	5%	50V	
C683	1-136-165-00	FILM	0.1uF	5%	50V	
C684	1-126-941-11	ELECT	470uF	20%	6.3V	
C901	1-126-943-11	ELECT	2200uF	20%	25V	
C902	1-126-939-11	ELECT	10000uF	20%	16V	
C903	1-126-941-11	ELECT	470uF	20%	6.3V	
C904	1-126-916-11	ELECT	1000uF	20%	6.3V	
C905	1-128-553-11	ELECT	220uF	20%	63V	
C906	1-124-122-11	ELECT	100uF	20%	50V	
C907	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C908	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C910	1-124-564-11	ELECT	4700uF	20%	25V	
C911	1-124-902-00	ELECT	0.47uF	20%	50V	
C912	1-126-942-61	ELECT	1000uF	20%	16V	
C913	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C920	1-124-564-11	ELECT	4700uF	20%	25V	
C921	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C922	1-126-942-61	ELECT	1000uF	20%	16V	
C923	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C931	1-126-934-11	ELECT	220uF	20%	16V	
C932	1-164-159-11	CERAMIC	0.1uF		50V	
C933	1-126-925-11	ELECT	470uF	20%	10V	
C934	1-136-165-00	FILM	0.1uF	5%	50V	
C998	1-164-159-11	CERAMIC	0.1uF		50V	
C999	1-164-159-11	CERAMIC	0.1uF		50V	

< CONNECTOR >

*	CN301	1-564-706-31	PIN, CONNECTOR (SMALL TYPE) 4P
*	CN302	1-568-845-11	SOCKET, CONNECTOR 31P
*	CN303	1-568-836-11	SOCKET, CONNECTOR 17P
	CN341	1-770-164-11	PIN, CONNECTOR (PC BOARD) 15P
*	CN401	1-564-339-00	PIN, CONNECTOR 5P
*	CN601	1-564-708-11	PIN, CONNECTOR (SMALL TYPE) 6P
	CN651	1-564-510-11	PLUG (MICRO CONNECTOR) 6P
	CN691	1-573-095-11	SOCKET, CONNECTOR 15P
	CN901	1-691-767-11	PLUG (MICRO CONNECTOR) 5P
	CN902	1-691-768-11	PLUG (MICRO CONNECTOR) 6P

< DIODE >

D101	8-719-987-63	DIODE 1N4148M
D102	8-719-987-63	DIODE 1N4148M
D103	8-719-987-63	DIODE 1N4148M
D104	8-719-987-63	DIODE 1N4148M
D151	8-719-987-63	DIODE 1N4148M
D152	8-719-987-63	DIODE 1N4148M
D153	8-719-987-63	DIODE 1N4148M

MAIN

Ref. No.	Part No.	Description	Remark
D154	8-719-987-63	DIODE 1N4148M	
D321	8-719-987-63	DIODE 1N4148M	
D331	8-719-987-63	DIODE 1N4148M	
D333	8-719-987-63	DIODE 1N4148M	
D411	8-719-200-82	DIODE 11ES2	
D412	8-719-200-82	DIODE 11ES2	
D413	8-719-200-82	DIODE 11ES2	
D421	8-719-200-82	DIODE 11ES2	
D422	8-719-200-82	DIODE 11ES2	
D501	8-719-045-72	DIODE KV1550NT	
D651	8-719-987-63	DIODE 1N4148M	
D901	8-719-200-77	DIODE 10E2N	
D902	8-719-200-77	DIODE 10E2N	
D903	8-719-200-77	DIODE 10E2N	
D904	8-719-200-77	DIODE 10E2N	
D905	8-719-312-47	DIODE RBA-406B	
D906	8-719-200-82	DIODE 11ES2	
D907	8-719-987-63	DIODE 1N4148M	
D908	8-719-015-13	DIODE UZP-9.1BC-TP	
D911	8-719-200-77	DIODE 10E2N	
D912	8-719-200-77	DIODE 10E2N	
D913	8-719-200-77	DIODE 10E2N	
D914	8-719-200-77	DIODE 10E2N	
		< FUSE >	
⚠F901	1-532-464-51	FUSE TIME-LAG (T2.5A/250V)	(AEP, UK, German)
⚠F901	1-576-105-11	FUSE (2.5A/250V)(US, Canadian)	
⚠F911	1-532-774-11	FUSE, MICRO (SECONDARY) (630mA/125V)	(US, Canadian)
⚠F921	1-532-774-11	FUSE, MICRO (SECONDARY) (630mA/125V)	(US, Canadian)
		< IC >	
IC301	8-759-927-72	IC TL1591CP	
IC302	8-759-701-01	IC NJM2904M	
IC304	8-752-355-55	IC CXD2605Q	
IC305	8-752-364-91	IC CXK58257BM-10LL-T6	
IC306	8-759-925-90	IC SN74HC74ANS	
IC308	8-759-634-43	IC M51953BFP	
IC310	8-752-884-88	IC CXP87532-036Q	
IC331	8-759-242-84	IC TORX176 (OPTICAL IN)	
IC332	8-759-242-85	IC TOTX176 (OPTICAL OUT)	
IC421	8-759-823-94	IC LB1836M	
IC431	8-759-701-01	IC NJM2904M	
IC441	8-759-701-01	IC NJM2904M	
IC451	8-759-701-01	IC NJM2904M	
IC501	8-759-242-70	IC TC7WU04F	
IC601	8-759-602-83	IC M5238P	

Ref. No.	Part No.	Description	Remark
IC602	8-759-602-83	IC M5238P	
IC603	8-759-330-53	IC CXD8493M-E1	
IC604	8-759-094-53	IC TA7805S	
IC605	8-759-094-68	IC TA79005S-LBSONY	
IC606	8-759-094-53	IC TA7805S	
IC651	8-759-900-72	IC NE5532P	
IC652	8-759-900-72	IC NE5532P	
IC653	8-759-370-62	IC CXD8505BQ	
IC654	8-759-094-53	IC TA7805S	
IC901	8-759-504-46	IC PQ05RF1	
IC902	8-759-504-46	IC PQ05RF1	
IC903	8-759-602-66	IC M5230L-A	
IC904	8-759-390-48	IC uPC2406AHF	
IC999	8-759-426-52	IC AT24C01A-10SC-TP-B	
		< IC LINK >	
⚠ICP911	1-532-837-21	LINK, IC (630mA/90V) (AEP, UK, German)	
⚠ICP921	1-532-837-21	LINK, IC (630mA/90V) (AEP, UK, German)	
		< PIN JACK >	
* J101	1-569-443-11	JACK, PIN 4P (ANALOG LINE IN/OUT)	
J331	1-770-905-11	JACK, PIN 1P (COAXIAL IN)	
		< COIL >	
L301	1-408-405-00	INDUCTOR 4.7uH	
L302	1-410-509-11	INDUCTOR 10uH	
L331	1-410-509-11	INDUCTOR 10uH	
L341	1-410-515-11	INDUCTOR 33uH	
L501	1-410-499-41	INDUCTOR 1.5uH	
L502	1-410-509-11	INDUCTOR 10uH	
L601	1-410-509-11	INDUCTOR 10uH	
L991	1-410-509-11	INDUCTOR 10uH	
		< TRANSISTOR >	
Q221	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q271	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q321	8-729-900-89	TRANSISTOR UN4213-TA	
Q322	8-729-900-89	TRANSISTOR DTC144ES	
Q340	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q341	8-729-900-89	TRANSISTOR DTC144ES	
Q342	8-729-422-57	TRANSISTOR UN4111	
Q351	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q411	8-729-900-80	TRANSISTOR DTC114ES	
Q412	8-729-927-12	TRANSISTOR 2SC4115SQR	
Q413	8-729-900-80	TRANSISTOR DTC114ES	
Q414	8-729-927-11	TRANSISTOR 2SA1585SQR	
Q441	8-729-801-93	TRANSISTOR 2SD1387	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le neméro spécifié.

Continued on page 14.

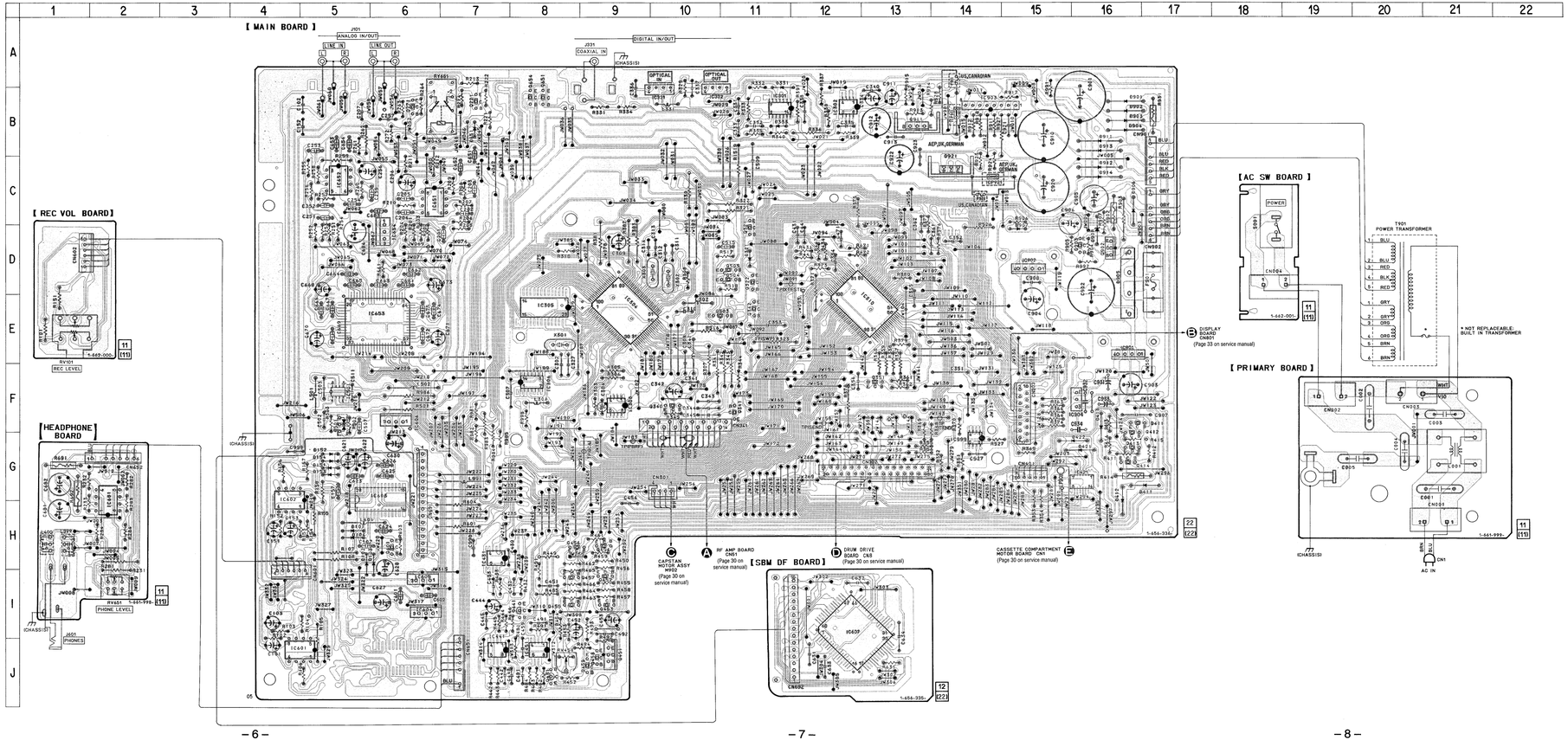
SECTION 2
DIAGRAMS

- **Semiconductor Location**

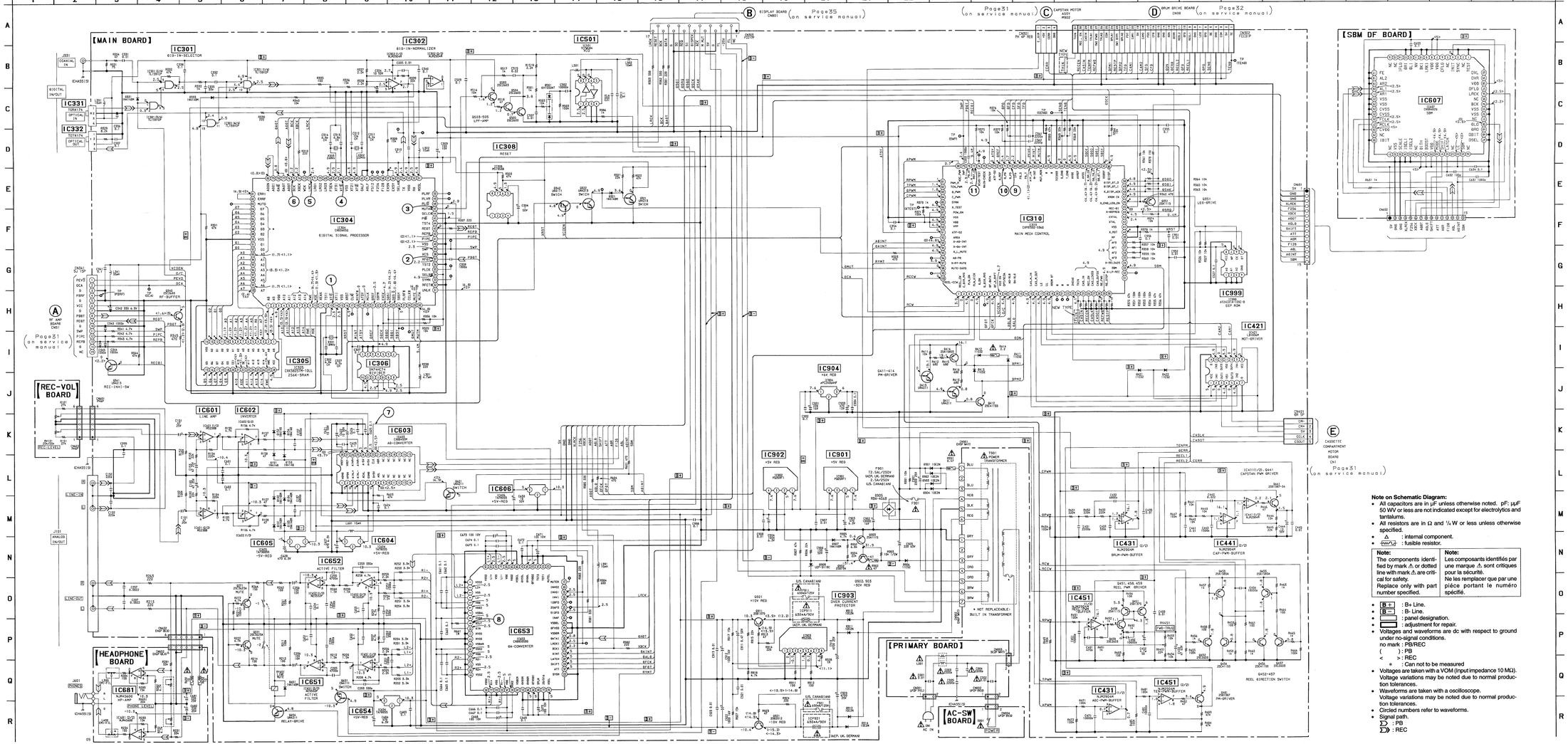
Ref. No.	Location	Ref. No.	Location
D101	H-5	IC604	I-6
D102	H-5	IC605	I-6
D103	H-6	IC606	F-6
D104	H-5	IC607	I-12
D151	G-5	IC651	C-6
D152	G-5	IC652	C-5
D153	G-5	IC653	E-6
D154	G-5	IC654	D-6
D321	D-11	IC681	G-2
D331	B-11	IC901	E-16
D333	B-11	IC902	D-15
D411	G-17	IC903	B-14
D412	H-16	IC904	F-16
D413	F-16	IC999	G-14
D421	G-16		
D422	G-16	Q221	B-7
D501	F-5	Q271	B-6
D651	B-7	Q321	D-11
D901	B-16	Q322	D-11
D902	B-16	Q340	F-10
D903	B-16	Q341	F-11
D904	B-16	Q342	E-11
D905	D-16	Q351	F-13
D906	C-16	Q411	F-16
D907	D-15	Q412	G-16
D908	D-16	Q413	G-16
D911	B-16	Q414	G-16
D912	C-16	Q441	I-8
D913	B-16	Q451	J-9
D914	C-16	Q452	I-9
		Q453	I-9
IC301	B-11	Q454	H-9
IC302	B-12	Q455	I-8
IC304	E-9	Q456	H-8
IC305	E-8	Q457	I-8
IC306	F-8	Q458	J-9
IC308	F-9	Q459	J-9
IC310	E-13	Q481	J-8
IC331	B-10	Q503	E-10
IC332	B-10	Q504	D-11
IC421	G-16	Q505	D-11
IC431	H-7	Q601	H-6
IC441	J-7	Q651	B-8
IC451	J-8	Q654	B-8
IC501	F-5	Q902	D-16
IC601	J-5	Q903	D-16
IC602	G-4	Q911	B-13
IC603	G-6	Q921	C-14

Note on Printed Wiring Board:
- o—— : parts extracted from the component side.
- △ : internal component.
- ▒▒ : Pattern from the side which enables seeing.

2-1. PRINTED WIRING BOARDS – MAIN Section –



2-2. SCHEMATIC DIAGRAM – MAIN Section –



Note on Schematic Diagram:

- All capacitors are in µF unless otherwise noted. pF: µµF
  50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- △ : internal component.
- ⚠ : fusible resistor.

Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- B+ : B+ Line.
- B− : B- Line.
- ▭ : panel designation.
- ▭ : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark : PB/REC
  ( ) : PB
  < > : REC
  n : Can not to be measured
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ▷ : PB
  ▷▷ : REC

Continued from page 4.

MAIN

Ref. No.	Part No.	Description				Remark
Q451	8-729-141-83	TRANSISTOR	2SB1094-LK			
Q452	8-729-620-05	TRANSISTOR	2SC2603-EF			
Q453	8-729-927-11	TRANSISTOR	2SA1585SQR			
Q454	8-729-927-12	TRANSISTOR	2SC4115SQR			
Q455	8-729-927-11	TRANSISTOR	2SA1585SQR			
Q456	8-729-927-12	TRANSISTOR	2SC4115SQR			
Q457	8-729-620-05	TRANSISTOR	2SC2603-EF			
Q458	8-729-119-76	TRANSISTOR	2SA1175-HFE			
Q459	8-729-620-05	TRANSISTOR	2SC2603-EF			
Q481	8-729-801-93	TRANSISTOR	2SD1387			
Q503	8-729-620-05	TRANSISTOR	2SC2603-EF			
Q504	8-729-620-05	TRANSISTOR	2SC2603-EF			
Q505	8-729-620-05	TRANSISTOR	2SC2603-EF			
Q601	8-729-900-80	TRANSISTOR	DTC114ES			
Q651	8-729-422-57	TRANSISTOR	UN4111			
Q654	8-729-900-80	TRANSISTOR	DTC114ES			
Q902	8-729-140-97	TRANSISTOR	2SB734-34			
Q903	8-729-119-76	TRANSISTOR	2SA1175-HFE			
Q911	8-729-141-83	TRANSISTOR	2SB1094-LK			
Q921	8-729-209-15	TRANSISTOR	2SD2012			
		< RESISTOR >				
R102	1-249-441-11	CARBON	100K	5%	1/4W	
R103	1-249-433-11	CARBON	22K	5%	1/4W	
R104	1-247-887-00	CARBON	220K	5%	1/4W	
R105	1-249-425-11	CARBON	4.7K	5%	1/4W	
R106	1-249-425-11	CARBON	4.7K	5%	1/4W	
R107	1-249-401-11	CARBON	47	5%	1/4W	
R108	1-249-401-11	CARBON	47	5%	1/4W	
R152	1-249-441-11	CARBON	100K	5%	1/4W	
R153	1-249-433-11	CARBON	22K	5%	1/4W	
R154	1-247-887-00	CARBON	220K	5%	1/4W	
R155	1-249-425-11	CARBON	4.7K	5%	1/4W	
R156	1-249-425-11	CARBON	4.7K	5%	1/4W	
R157	1-249-401-11	CARBON	47	5%	1/4W	
R158	1-249-401-11	CARBON	47	5%	1/4W	
R201	1-259-440-11	CARBON	3.3K	1%	1/6W	
R202	1-259-440-11	CARBON	3.3K	1%	1/6W	
R203	1-259-440-11	CARBON	3.3K	1%	1/6W	
R204	1-259-440-11	CARBON	3.3K	1%	1/6W	
R205	1-259-436-11	CARBON	2.2K	1%	1/6W	
R206	1-259-436-11	CARBON	2.2K	1%	1/6W	
R207	1-259-444-11	CARBON	4.7K	1%	1/6W	
R208	1-259-444-11	CARBON	4.7K	1%	1/6W	
R209	1-249-419-11	CARBON	1.5K	5%	1/4W	
R210	1-249-419-11	CARBON	1.5K	5%	1/4W	
R211	1-249-441-11	CARBON	100K	5%	1/4W	
R212	1-247-807-31	CARBON	100	5%	1/4W	
R213	1-249-409-11	CARBON	220	5%	1/4W	

Ref. No.	Part No.	Description				Remark
R214	1-249-407-11	CARBON	150	5%	1/4W	
R221	1-249-441-11	CARBON	100K	5%	1/4W	
R222	1-249-425-11	CARBON	4.7K	5%	1/4W	
R251	1-259-440-11	CARBON	3.3K	1%	1/6W	
R252	1-259-440-11	CARBON	3.3K	1%	1/6W	
R253	1-259-440-11	CARBON	3.3K	1%	1/6W	
R254	1-259-440-11	CARBON	3.3K	1%	1/6W	
R255	1-259-436-11	CARBON	2.2K	1%	1/6W	
R256	1-259-436-11	CARBON	2.2K	1%	1/6W	
R257	1-259-444-11	CARBON	4.7K	1%	1/6W	
R258	1-259-444-11	CARBON	4.7K	1%	1/6W	
R259	1-249-419-11	CARBON	1.5K	5%	1/4W	
R260	1-249-419-11	CARBON	1.5K	5%	1/4W	
R261	1-249-441-11	CARBON	100K	5%	1/4W	
R262	1-247-807-31	CARBON	100	5%	1/4W	
R263	1-249-409-11	CARBON	220	5%	1/4W	
R264	1-249-407-11	CARBON	150	5%	1/4W	
R272	1-249-425-11	CARBON	4.7K	5%	1/4W	
R303	1-249-437-11	CARBON	47K	5%	1/4W	
R305	1-249-429-11	CARBON	10K	5%	1/4W	
R306	1-249-429-11	CARBON	10K	5%	1/4W	
R307	1-249-409-11	CARBON	220	5%	1/4W	
R308	1-249-429-11	CARBON	10K	5%	1/4W	
R310	1-249-409-11	CARBON	220	5%	1/4W	
R321	1-249-433-11	CARBON	22K	5%	1/4W	
R322	1-249-437-11	CARBON	47K	5%	1/4W	
R323	1-249-413-11	CARBON	470	5%	1/4W	
R329	1-249-428-11	CARBON	8.2K	5%	1/4W	
R330	1-249-409-11	CARBON	220	5%	1/4W	
R331	1-247-804-11	CARBON	75	5%	1/4W	
R332	1-249-437-11	CARBON	47K	5%	1/4W	
R333	1-249-417-11	CARBON	1K	5%	1/4W	
R334	1-249-401-11	CARBON	47	5%	1/4W	
R335	1-247-807-31	CARBON	100	5%	1/4W	
R336	1-249-431-11	CARBON	15K	5%	1/4W	
R337	1-249-421-11	CARBON	2.2K	5%	1/4W	
R338	1-249-421-11	CARBON	2.2K	5%	1/4W	
R339	1-249-435-11	CARBON	33K	5%	1/4W	
R340	1-249-429-11	CARBON	10K	5%	1/4W	
R341	1-249-425-11	CARBON	4.7K	5%	1/4W	
R342	1-249-425-11	CARBON	4.7K	5%	1/4W	
R343	1-249-425-11	CARBON	4.7K	5%	1/4W	
R344	1-249-437-11	CARBON	47K	5%	1/4W	
R345	1-249-413-11	CARBON	470	5%	1/4W	
R351	1-249-441-11	CARBON	100K	5%	1/4W	
R352	1-249-441-11	CARBON	100K	5%	1/4W	
R353	1-249-441-11	CARBON	100K	5%	1/4W	
R354	1-249-441-11	CARBON	100K	5%	1/4W	
R355	1-249-437-11	CARBON	47K	5%	1/4W	

MAIN

Ref. No.	Part No.	Description				Remark
R356	1-249-437-11	CARBON	47K	5%	1/4W	
R357	1-249-429-11	CARBON	10K	5%	1/4W	
R358	1-249-429-11	CARBON	10K	5%	1/4W	
R359	1-249-429-11	CARBON	10K	5%	1/4W	
R360	1-249-429-11	CARBON	10K	5%	1/4W	
R361	1-249-429-11	CARBON	10K	5%	1/4W	
R362	1-249-413-11	CARBON	470	5%	1/4W	
R363	1-249-429-11	CARBON	10K	5%	1/4W	
R364	1-249-429-11	CARBON	10K	5%	1/4W	
R365	1-249-429-11	CARBON	10K	5%	1/4W	
R366	1-249-429-11	CARBON	10K	5%	1/4W	
R368	1-249-435-11	CARBON	33K	5%	1/4W	
R369	1-249-435-11	CARBON	33K	5%	1/4W	
R370	1-249-437-11	CARBON	47K	5%	1/4W	
R371	1-249-441-11	CARBON	100K	5%	1/4W	
R373	1-249-417-11	CARBON	1K	5%	1/4W	
R374	1-249-429-11	CARBON	10K	5%	1/4W	
R375	1-249-429-11	CARBON	10K	5%	1/4W	
R376	1-249-429-11	CARBON	10K	5%	1/4W	
R377	1-249-429-11	CARBON	10K	5%	1/4W	
R378	1-249-407-11	CARBON	150	5%	1/4W	
R379	1-249-417-11	CARBON	1K	5%	1/4W	
R380	1-249-437-11	CARBON	47K	5%	1/4W	
R381	1-249-409-11	CARBON	220	5%	1/4W	
R382	1-249-411-11	CARBON	330	5%	1/4W	
R383	1-249-411-11	CARBON	330	5%	1/4W	
R391	1-249-437-11	CARBON	47K	5%	1/4W	
R411	1-249-429-11	CARBON	10K	5%	1/4W	
R412	1-249-415-11	CARBON	680	5%	1/4W	
R413	1-249-415-11	CARBON	680	5%	1/4W	
⚠R414	1-217-639-00	FUSIBLE	2.2	5%	1/4W	F
R415	1-249-415-11	CARBON	680	5%	1/4W	
R416	1-249-415-11	CARBON	680	5%	1/4W	
R431	1-247-887-00	CARBON	220K	5%	1/4W	
R432	1-247-887-00	CARBON	220K	5%	1/4W	
R433	1-247-887-00	CARBON	220K	5%	1/4W	
R434	1-249-441-11	CARBON	100K	5%	1/4W	
R441	1-249-429-11	CARBON	10K	5%	1/4W	
R442	1-249-429-11	CARBON	10K	5%	1/4W	
R443	1-249-429-11	CARBON	10K	5%	1/4W	
R444	1-249-429-11	CARBON	10K	5%	1/4W	
R445	1-249-433-11	CARBON	22K	5%	1/4W	
R446	1-249-401-11	CARBON	47	5%	1/4W	
R447	1-249-441-11	CARBON	100K	5%	1/4W	
R449	1-249-441-11	CARBON	100K	5%	1/4W	
R450	1-249-417-11	CARBON	1K	5%	1/4W	
R451	1-249-441-11	CARBON	100K	5%	1/4W	
R452	1-249-417-11	CARBON	1K	5%	1/4W	
R453	1-249-429-11	CARBON	10K	5%	1/4W	

Ref. No.	Part No.	Description				Remark
R454	1-249-429-11	CARBON	10K	5%	1/4W	
R455	1-249-441-11	CARBON	100K	5%	1/4W	
R456	1-249-417-11	CARBON	1K	5%	1/4W	
R457	1-249-417-11	CARBON	1K	5%	1/4W	
R458	1-247-807-31	CARBON	100	5%	1/4W	
R459	1-247-807-31	CARBON	100	5%	1/4W	
R461	1-247-807-31	CARBON	100	5%	1/4W	
R462	1-249-417-11	CARBON	1K	5%	1/4W	
R463	1-249-417-11	CARBON	1K	5%	1/4W	
R464	1-247-807-31	CARBON	100	5%	1/4W	
R465	1-249-417-11	CARBON	1K	5%	1/4W	
R466	1-249-441-11	CARBON	100K	5%	1/4W	
R471	1-249-441-11	CARBON	100K	5%	1/4W	
R472	1-249-441-11	CARBON	100K	5%	1/4W	
R481	1-249-441-11	CARBON	100K	5%	1/4W	
R482	1-249-401-11	CARBON	47	5%	1/4W	
R483	1-249-437-11	CARBON	47K	5%	1/4W	
R484	1-249-437-11	CARBON	47K	5%	1/4W	
R485	1-249-441-11	CARBON	100K	5%	1/4W	
R491	1-249-417-11	CARBON	1K	5%	1/4W	
R492	1-249-417-11	CARBON	1K	5%	1/4W	
R493	1-249-407-11	CARBON	150	5%	1/4W	
R494	1-247-807-31	CARBON	100	5%	1/4W	
R501	1-249-417-11	CARBON	1K	5%	1/4W	
R502	1-249-429-11	CARBON	10K	5%	1/4W	
R503	1-249-441-11	CARBON	100K	5%	1/4W	
R516	1-249-429-11	CARBON	10K	5%	1/4W	
R517	1-249-417-11	CARBON	1K	5%	1/4W	
R518	1-249-401-11	CARBON	47	5%	1/4W	
R526	1-249-429-11	CARBON	10K	5%	1/4W	
R527	1-249-429-11	CARBON	10K	5%	1/4W	
R528	1-247-903-00	CARBON	1M	5%	1/4W	
R601	1-249-413-11	CARBON	470	5%	1/4W	
R603	1-249-437-11	CARBON	47K	5%	1/4W	
R604	1-249-413-11	CARBON	470	5%	1/4W	
R661	1-247-903-00	CARBON	1M	5%	1/4W	
⚠R902	1-212-873-11	FUSIBLE	47	5%	1/4W	F
R903	1-260-111-11	CARBON	10K	5%	1/2W	
R904	1-249-433-11	CARBON	22K	5%	1/4W	
R905	1-249-425-11	CARBON	4.7K	5%	1/4W	
R906	1-249-433-11	CARBON	22K	5%	1/4W	
R907	1-249-437-11	CARBON	47K	5%	1/4W	
R911	1-247-807-31	CARBON	100	5%	1/4W	
R912	1-247-807-31	CARBON	100	5%	1/4W	
R913	1-249-401-11	CARBON	47	5%	1/4W	
R914	1-249-409-11	CARBON	220	5%	1/4W	
R915	1-249-433-11	CARBON	22K	5%	1/4W	
R917	1-249-431-11	CARBON	15K	5%	1/4W	
R918	1-249-425-11	CARBON	4.7K	5%	1/4W	
R923	1-249-401-11	CARBON	47	5%	1/4W	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le neméro spécifié.

Ref. No.	Part No.	Description				Remark
R924	1-249-409-11	CARBON	220	5%	1/4W	
R927	1-249-431-11	CARBON	15K	5%	1/4W	
⚠R931	1-219-123-11	FUSIBLE	0.47	5%	1/4W	F
R981	1-249-411-11	CARBON	330	5%	1/4W	
R982	1-249-409-11	CARBON	220	5%	1/4W	
R983	1-249-409-11	CARBON	220	5%	1/4W	
R984	1-249-415-11	CARBON	680	5%	1/4W	
R985	1-249-409-11	CARBON	220	5%	1/4W	
R986	1-249-417-11	CARBON	1K	5%	1/4W	
R991	1-249-429-11	CARBON	10K	5%	1/4W	
R992	1-249-427-11	CARBON	6.8K	5%	1/4W	
R998	1-249-409-11	CARBON	220	5%	1/4W	
R1519	1-249-421-11	CARBON	2.2K	5%	1/4W	
		< VARIABLE RESISTOR >				
RV451	1-241-765-11	RES, ADJ, CARBON 22K				
		< RELAY >				
RY651	1-515-803-11	RELAY				
		< VIBRATOR >				
X301	1-567-816-11	VIBRATOR, CRYSTAL (18MHz)				
X302	1-567-815-11	VIBRATOR, CRYSTAL (22MHz)				
X303	1-567-814-11	VIBRATOR, CRYSTAL (24MHz)				

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le neméro spécifié.